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THE NATURE OF THE FINANCIAL ACCOUNTING PROCESS*

George O. May

Accounting has been defined by a committee of the American Institute of Accountants as "the art of recording, classifying and summarizing, in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character, and interpreting the results thereof." It is an art, not a science, but an art of wide and varied usefulness. The purely recording function of accounting, though indispensable, concerns only technicians. Its analytical and interpretive functions are of two kinds. One type of analysis is intended to afford aid to management in the conduct of business and is of interest mainly to executives. The other type leads to the presentation of statements relating to the financial position and results of operations of a business for the guidance of directors, stockholders, credit grantors, and others. This process of financial accounting, therefore, possesses a wide importance for persons who are neither accountants nor executives.

Many accountants are reluctant to admit that accounting is based on nothing of a higher order of sanctity than conventions. However, it is apparent that this is necessarily true of accounting as it is, for instance, of business law. In these fields there are no principles, in the fundamental sense of that word, on which we can build; and the distinctions among laws, rules, standards, and conventions lie not in their nature but in the kind of sanctions by which they are enforced. Accounting procedures have in the main been the result of common agreement among accountants, although they have to some extent, and particularly in recent years, been influenced by laws or regulations.

Conventions, to have authority, must be well conceived. Accounting conventions should be well conceived in relation to at least three things: first, the uses of accounts; second, the social and economic concepts of the time and place; and, third, the modes of thought of the people. It follows that as economic and social concepts or modes of thought change, accounting concepts may have to change with them.

The first point for consideration is, therefore, the major uses of financial statements. We can recognize at least ten distinguishable uses:

1. As a report of stewardship
2. As a basis for fiscal policy
3. As a criterion of the legality of dividends
4. As a guide to wise dividend action
5. As a basis for the granting of credit
6. As information for prospective investors in an enterprise
7. As a guide to the value of investments already made
8. As an aid to government supervision

* Adapted from materials prepared for a forthcoming book by the same author.

9. As a basis for price or rate regulation
10. As a basis for taxation

General-purpose statements are not suitable in all of these cases; in some instances, special-purpose statements are called for. This has become increasingly recognized in respect of rate or price control and taxation, and it should also be recognized, for reasons which I shall indicate later, in respect of information for new investors—or, in other words, for the prospectus—and also in some cases for the determination of the legality of a dividend. But even if these purposes are eliminated, there remain at least six which are expected to be served by general-purpose statements.

It is immediately apparent that any general-purpose statements cannot be expected to serve all the purposes equally well—indeed, if they are to be appropriate for the major uses, it is likely that they will not serve some other purposes even reasonably well. It becomes necessary, therefore, to consider which are to be regarded as the controlling objectives, and to view the possibility of changes therein.

Accounting conventions must take cognizance of the social and economic concepts of the time and place. Conventions which are acceptable in a pioneer, free-enterprise economy may not be equally appropriate in a more mature, free-enterprise economy, and may lose their validity entirely in a controlled economy. Some existing accounting conventions seem to assume implicitly the existence of *laissez faire* and may require reconsideration as prices, interest rates, and other vital elements become the subject of conscious government control. Under this head must be considered, also, the forms of business organization and changes either in the nature of the dominant type or types or in the laws governing them. Systems of taxation and legal decisions growing out of them also influence accounting concepts.

The third and last consideration which has been mentioned as affecting accounting conventions is the modes of thought of the people. The extent and the nature of legal influence in business affairs will affect the conventions; those developed in the atmosphere of the common law will differ from those evolved under a civil code system. So, too, a people thinking in terms of capital value and a people thinking in terms of annual value will naturally reach different conclusions on some points, as is evidenced by the American and British attitudes towards capital gains and losses in taxation and accounting.

The relevance and importance of such considerations as these have been borne in on me by the events of the forty-five years of my experience in American accounting. Within this time we have moved from what might be called the last days of a pioneer, free-enterprise economy to a period in which a large and growing segment of enterprise is under a substantial measure of government control. The major part of the development of the corporation as the typical form of business organization has occurred within the same period; there has been a marked movement toward the separation of beneficial ownership from management.

Beginning with the control over railroad accounting given to the Interstate Commerce Commission in 1907, we have seen a steady growth of accounting by prescription, and a shift from the common-law mode of thought towards that of the civil code.

The laxness of our corporation laws and the ease of reincorporation have impaired the significance of the corporation as an accounting unit. The extension of intercorporate holdings has increased the importance of accounting for interest, dividends, and other forms of transferred income; manifestly, such accounting involves different problems from those

encountered in dealing with primary income, such as that from manufacturing. The creation of a wide variety of forms of capital obligations has raised questions as to the accounting significance of legal distinctions, often highly artificial, between bonds and stocks and between interest and dividends.

Perhaps the most significant change of all is the shift of emphasis from the balance sheet to the income statement, and particularly to the income statement as a guide to earning capacity rather than as an indication of accretions to disposable income.

It is appropriate, next, to consider what alternative approaches to the problem of formulating or revising the conventions of financial accounting are open to us. First of all, there is a choice between the value and the cost approach, or perhaps rather a question as to how the two can best be combined. This combination is illustrated in the custom of carrying inventories at cost or market value, whichever is lower—one of the oldest of accounting practices.

There is a choice between different concepts of income and between different theories of allocation of income to periods. We have the concept according to which income arises gradually, and the concept which treats income as arising at a moment when realization is deemed to have occurred. Here again, both concepts in practice are adopted to some, but not to an unchanging, extent. Today, the interesting question is presented whether accounting is likely to move in the direction of a more complete adherence to the realization concept of income or towards wider application of the doctrine of gradual accrual.

There is also a choice between the enterprise as the accounting unit and the legal entity that carries on the enterprise as the accounting unit. The system of consolidated accounts, freely employed in corporate reporting, is a departure from the strict separate-entity theory. In recent years, the adoption by public service commissions of the concept of cost to the first person who devoted property to the public service, as the basis of property accounting of the present owners, has created a new interest in enterprise accounting, of which it is a crude and inadequate variant, and along with it a new series of problems.

The range of possible choice of conventions might be extended if some postulates, commonly adopted, were discarded. It is, for instance, generally assumed that financial statements must be in a continuous, related series, but it may be argued that there is no absolute compulsion that they should be. The problem of continuity presents difficulties when a substantial change of conventions occurs—as, for instance, when public utility corporations are required for financial accounting purposes (and not merely for rate purposes) to account for property on the basis of the cost to the first purchaser who devoted the property to public service, instead of on the traditional basis of cost to themselves; or when straight-line depreciation accounting is substituted for other methods of dealing with property consumption which have been employed and sanctioned for decades.

Again, the monetary unit is generally assumed to be substantially constant in value, but at times this assumption of stability has to be abandoned, with the result that accounting conventions have to be modified.

The choice of conventions in financial accounting, as in cost accounting, is to some extent affected by the conflict among considerations of speed, accuracy, and expense. The accountant is called upon to produce general-purpose statements within a few weeks of the completion of the fiscal period to which they relate. These reports are expected to be final and to serve a

great diversity of purposes. Delay in preparation might permit of greater refinement but might impair the usefulness of the statements; hence conventions must be such as to be capable of prompt application.

In a pioneer economy, the great opportunity for making profits is likely to lie in participating in the growth of the country and in the accompanying increase of values. At such a time capital will be relatively scarce, whereas labor—particularly if there is free immigration—may be plentiful. These causes will contribute to make capital investment relatively small; and the proportion of assets that are readily salable, and may be expected to be realized in a short time, will be comparatively high.

In such circumstances, the value approach to accounting has a strong appeal. In reading American accounting literature, it is surprising to find how generally accounting has been described as a process of valuation, how this view has been maintained down to a rather recent date, and how pronounced and rapid the change of view has been. In a more mature economy, when greater capital resources, and, perhaps, changes in labor conditions also, tend to produce constantly increasing capital investment, business units become larger and enterprises more complex. Then the valuation approach becomes impracticable and resort to cost as the primary line of approach becomes almost inevitable.

The change from a value basis to a cost basis is of great importance in relation to such questions as the rate base and the "surplus assets" theory of limitation of dividends. It is undeniable, though not fully recognized outside the profession, that books of large enterprises are kept predominantly on a cost basis and do not, therefore, constitute evidence of the value of either the enterprise as a whole or of the separate assets thereof, particularly the capital assets. This might be deemed to be a serious defect of accounting procedures except for two considerations—first, that the value of the enterprise is seldom a material fact for consideration; and, second, that when it is, it can be measured only by looking ahead. For this purpose, the sole relevance of accounts of the past is as a means of throwing light on the prospects for the future. These considerations have additional force if the implicit assumption that the monetary unit remains stable is widely at variance with reality—as, for instance, in the case of property acquired before a substantial decline in the purchasing power of the monetary unit such as occurred between 1913 and 1920.

Forty-five years ago the external influence acting on accounting with the greatest effect was that of the credit grantor. In recent years there has been a marked shift of emphasis, and the use of accounting statements as a guide in the purchase or sale of securities has been more heavily stressed as a result of the efforts to impart liquidity to investments in long-term enterprises. In the early days, conservatism was the cardinal virtue of accounting; now, the virtue of conservatism is questioned, and the greater emphasis is on consistency. At that time, also, uniform classifications that were binding on particular forms of enterprises were practically unknown. Today, they are numerous and increasing in number and scope.

In this article the only objects have been to bring out the true nature of the accounting process and to advance the thought that accounting conventions are not something fixed and unalterable, but something that, like the law, should have elements of stability and of flexibility. Times are changing and accounting conventions will change with them. Today, a study of the historical development of accounting conventions and of the causes which have brought about change may be more useful

than a description of present practice. It has frequently been said that the changes revealed by successive balance sheets are more significant than the individual balance sheets themselves. The same may be true of the conventions upon which balance sheets are based.

STRUCTURAL FUNDAMENTALS OF FINANCIAL STATEMENTS

HOWARD C. GREER

Accounting literature is rich with discussions of the analysis and interpretation of financial statements. It contains surprisingly little on the organization and presentation of accounting data to facilitate analysis and interpretation. Progress in this field seems to have been left largely to the accidents of practice and personal inclination.[1]

The first step toward making accounting statements tell an understandable story is to arrange them properly. If the grouping and the sequence of items are logical, statements interpret themselves. Suitable emphasis and proportion bring out salient facts clearly. Adroit combination and placement of items suggest significant relationships.

Consistent treatment of the various classes of elements in all financial statements would soon lead even the casual reader to a better appreciation of the basic financial aspects of business activities and their results. These now are often overlooked or misunderstood because of the thoughtless and haphazard arrangement of many published accounting reports.

The correct presentation of a balance sheet or an income statement is not simply a matter of taste or precedent. Certain truths are inherent in an accounting for business activities and results, and they should be recognized in accounting statements. A careless draftsman may ignore them, but he does not change their importance by so doing.

BASIC RELATIONSHIPS

What are the essential facts about the condition and the results of a business enterprise? This article attempts to point out some which are commonly overlooked, and to suggest how they may be illuminated by a logical arrangement of financial statements.

To arrive at a sound basis of arrangement and presentation it is necessary to consider—

(a) The nature of the balance sheet
(b) The nature of the income statement
(c) The relationships between them

In all three directions the study will be focused almost at once on relationships. Since one accounting fact assumes significance only in relation to another, comparison is inherent in every accounting analysis. What are these relationships, and what are the methods of presenting them?

[1] The author recently examined the tables of contents of a dozen textbooks on general accounting subjects without finding a chapter purporting to deal primarily with organization, arrangement, or presentation of accounting statements. The body of the texts is almost equally barren of discussion on this subject.

The primary relationship expressed in accounts is that of equality. Entries are equations; ledgers "balance." Accounting starts, then, with the primary proposition that this equals that.

Naturally many accounting statements stress this feature of "equality of factors." In the balance sheet attention is directed to the fact that property is equaled by ownership. A cash statement may show that the opening balance plus receipts equals disbursements plus the closing balance.

There is, however, another feature of the accounts which often attains almost the same emphasis. This is the "residual" aspect of business transactions, as expressed in the accounts. Something occurs, and there is something "left over." Income minus expense leaves profit—and, for that matter, assets minus liabilities leaves net worth.[2]

ALTERNATIVE METHODS OF PRESENTATION

Thus the accountant has a choice of methods. He may stress equalities, or he may stress residuals. Plainly both are important, and both are common elements in most accounting relationships. Either method would be serviceable on most occasions.

The odd and disturbing fact is that in setting up the two major financial statements accountants have generally selected one method for one statement, and a different method for the other. Balance sheets are statements of equality; income statements usually are brought down to a residual. This rather unfortunate choice has blinded many people to several of the most fundamental and significant accounting relationships.

It is clear that both statements could be presented in paralled form on either basis. For example, the accountant could arrange his facts to say:

Assets minus liabilities leaves owner's equity

Income minus expense leaves owner's profit

But he could also arrange his facts to say, with equally significant emphasis:

Assets equal equities (liabilities plus net worth)

Income earned equals income distributed (to all equity holders)

It is the last of these equations that least commonly appears, and it is this absence that leaves the greatest gap in accounting thinking.

Without arguing the merits of the alternative methods, it is worth while to explore the results of applying the "equation" method consistently to both the static and the dynamic portions of a corporation financial statement—that is, to both the balance sheet and the income statement.

THE BALANCE-SHEET EQUATION

This involves nothing new as to the balance sheet. The orthodox method of presentation sets out the accounting "valuations" assigned on the one hand to the properties owned and on the other to the respective equities of creditors and shareholders. The "worth" of the assets is counterbalanced by the "worth" of the claims against them. One side of the statement portrays the form in which the capital is invested and the other side the source from which the capital was derived.

In such a statement the interests of creditors are presented in terms of their *similarities* to the interests of owners. Both creditors and owners contribute capital, though on different terms. The balance sheet emphasizes their likenesses, rather than their differences.

[2] Note the suggested application of the residual method to balance-sheet presentation in "Do We Need A Balance Sheet?" by Chester Martin, *Journal of Accountancy*, April, 1943.

Graphically this situation may be presented thus—

Assets	=	Equities of Creditors
		Equities of Owners

THE INCOME-STATEMENT EQUATION

A point commonly overlooked is that exactly the same relationships are inherent in the income statement, although they are obscured by the ordinary mode of presentation. This is made plain by an analysis of the elements of "profit and loss" in their relations with the elements of "financial position."

A business enterprise employs its assets to produce income. This process may be one of buying and selling (trading), or of processing coupled with buying and selling (manufacturing), or of converting natural resources (extraction), or of mere loaning or renting (finance or service). In any case, the expectation is that income will exceed outgo, and that some "net income" will be produced.

This net income is available to pay a return for the use of the capital contributed by the various classes of equity holders—creditors and owners. The return to creditors is usually in the form of interest. The return to owners may be in the form of dividends, or in the form of accretions to "surplus" (undistributed profits). In other words, the return to creditors normally is distributed immediately, whereas the return to owners may be (a) distributed, or (b) apportioned without distribution.

This situation is portrayed graphically at the foot of this page.

The essential point in this analysis is that the ***production of income should be considered an activity distinct from the distribution of income***. The amount of income produced is equal to the amount of income distributed, just as the amount of capital employed is equal to the combined equities of its owners. In arranging the income statement it is important to separate the income-producing function from the income-distributing function—something not now regularly done in presenting financial statements.

Viewed in this light, interest payments (and related items such as discount amortization, etc.) assume their rightful position in the income statement. These payments have nothing to do with the production of income; they are an element in its distribution.[3]

INTER-STATEMENT RELATIONSHIPS

If the above distinction is accepted, sev-

[3] This is the "accounting" point of view, as distinguished from the economic theory that interest on capital is price-determining and hence an element of production cost. If such interest were to be included in costs, it would be *imputed* interest on *all* capital employed, not merely interest paid on the portion borrowed. Corporate accounting is generally organized to determine the earnings applicable to the capital invested, after paying for labor utilized, but without any attempt to segregate imputed interest on capital from entrepreneurial profit.

Income (net)	=	Payment to Creditors
		Payment (or Apportionment) to Owners

eral informative and useful relationships can be developed which otherwise will remain hidden. First it becomes possible to associate directly:

(1) The capital invested (assets) with the production of income

(2) The distribution (or apportionment) of income with the contribution of capital (equities)

This is the initial step in an informative analysis of financial statements.

These four fundamental and important relationships may be expressed as follows:

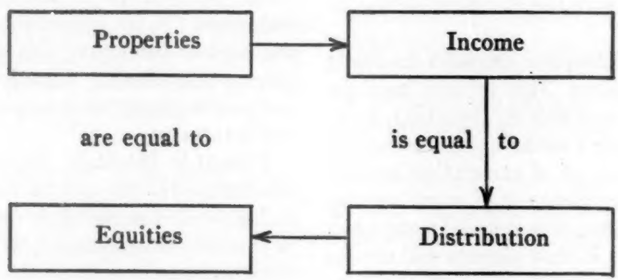
(1) Capital investment equals capital contributions

(2) Capital investment produces income

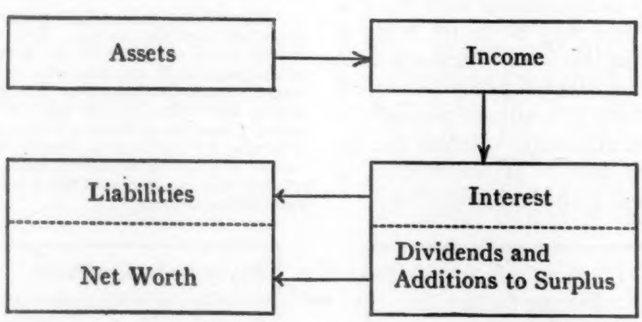
(3) Income production equals income distribution (apportionment)

(4) Income distribution relates to capital contributions

Graphic presentation of these relationships is best accomplished by vertical (instead of horizontal) placement of the opposing sides of the two statements, in this manner.



With the primary subdivisions indicated in conventional accounting terms, the arrangement would be as given below.



If arranged in this form, a set of simple financial statements would present the following information:

A. B. C. Corporation

Balance Sheet

Assets	
Cash	$ 10,000
Receivables	50,000
Inventories	75,000
Prepaid Expenses	5,000
Total Amount	$140,000
Plant Equipment	115,000
Total Assets	$255,000
Equities	
Accts. Payable	$ 25,000
Mortgage	50,000
Capital Stock	100,000
Surplus	80,000
Total Equities	$255,000

Income Statement

Income	
Sales	$725,000
Cost of Goods Sold	545,000
Gross Margin	$180,000
Operating Expenses	145,000
Operating Income	$ 35,000
Distribution	
Mortgage Interest	3,000
Profit before Taxes	$ 32,000
Income Tax	12,000
Net Profit	$ 20,000
Dividends	10,000
Balance to Surplus	$ 10,000

Relationships

Total assets of $255,000 produced operating income of $35,000, representing earnings of 13.7% on capital employed.

The division of income among equity holders was:

To creditors (interest)		$ 3,000 or 8.6%
To government (income tax)		12,000 or 34.3%
To owners (dividends)	10,000	
To owners (surplus)	10,000	20,000 or 57.1%

Rates of return were as follows:

To bondholders	$ 3,000 on $50,000 or 6.0%
To all creditors combined	3,000 on 75,000 or 4.0%
To owners	20,000 on 180,000 or 11.1%

GROUPING OF ASSET AND INCOME ITEMS

With this framework established, consideration may next be given to the classification of assets into major groups and the classification of income in a manner to correspond. If income is produced by the utilization of assets, it is important to know the income produced by each group, and the rate of earnings it represents.

The arrangement and grouping of items for this purpose is a matter of judgment, depending on the relative importance of various elements and the degree of distinction desired. The essential requirement is that the subdivision of assets be paralleled by the subdivision of income, and that (so far as practical) the same sequence be followed in both cases.

The primary subdivision of assets commonly required will distinguish between those used in the major operating activity and those not so used. Business concerns, especially the larger ones, while devoting most of their assets to their main income-producing activities, often divert some portion of their assets into unrelated, or "non-operating," properties (such as securities of other enterprises, "outside" real estate, etc.). This makes it desirable to divide the assets first into "operating" and "non-operating" groups.

Operating assets will normally include cash, receivables, inventories, expense prepayments,[4] plant and equipment, and perhaps certain intangibles such as patents

[4] This approach shows, incidentally, the inevitability of grouping prepayments of operating expenses in the operating-asset group, presumably in the current-asset section.

and goodwill. These assets, all of which have a part in the production of operating income, should appear in uninterrupted sequence in one section of the balance sheet, and should be brought down to an appropriately titled subtotal.

Nonoperating assets, regardless of their relative "currency," should not be mingled with this group, nor introduced in an intermediate position in the statement. Rather they should be placed in a separate section, at the end of the asset column, under some such heading as "Assets Not Used in Operations" and combined in a separate subtotal for that group.

The "income produced" section of the income statement should be similarly arranged and subdivided. Particulars of "operating income" should appear first, and should be followed by the amount of "nonoperating income," with or without detailed subdivision, depending on its relative importance. The sum of the two subtotals is the "total income produced" by the utilization of all the assets of the enterprise.

This is illustrated by the following simplified tabulation of asset and income factors in a hypothetical enterprise.

INCOME CLASSIFICATION DETERMINED BY ASSET GROUPING

The problem of classification of income between operating and nonoperating is simplified by relating the various income items to the classes of assets by which they are produced. All income from operating assets should be included with operating income, even though some of it may seem quite extraneous.

It should be observed, for example, that sales of scrap material, rental of portions of operating plant or equipment, income from services performed for outsiders by operating departments, and other items sometimes termed "nonoperating," actually are part of operating income, and as such should be added either to gross or to net income from manufacturing or trading operations, to determine total income produced by the utilization of operating assets.

The classification cannot always be determined merely from the name attached to the income item. For example, "interest received" may be partly operating and partly nonoperating, depending on the classification of the assets from which it flows. In-

D. E. F. Company
Financial Statements

Assets

Operating	
Cash	$ 140,000
Receivables	470,000
Inventories	860,000
Prepaid Expenses	25,000
Total Current	$1,495,000
Plant and Equipment	2,035,000
Total Operating	$3,530,000
Nonoperating	
Housing Development	$ 275,000
Misc. Securities	315,000
Total Nonoperating	$ 590,000
Total Assets	$4,120,000

(followed by liability side of balance sheet)

Income Production

Operating	
Sales	$6,570,000
Cost of Goods Sold	4,320,000
Gross Margin	$2,250,000
Selling and Administrative	1,370,000
Operating Income	$ 880,000
Nonoperating	
House Rentals—Net	$ 15,000
Interest and Dividends	10,000
Total Nonoperating	$ 25,000
Total Income Produced	$ 905,000

(followed by distribution side of income statement)

terest on temporary investments of cash balances in marketable securities or tax certificates may be considered operating assets (if the securities are treated as operating assets), while interest on the bonds of a nonaffiliated enterprise may be strictly nonoperating (since the asset will be considered an "outside investment").

An obvious point is that costs and expenses applicable to each class of revenues should be deducted from such revenues in arriving at the net income produced by each class of assets. The "net" may sometimes be a loss, indicating a negative earning on that particular class of assets.

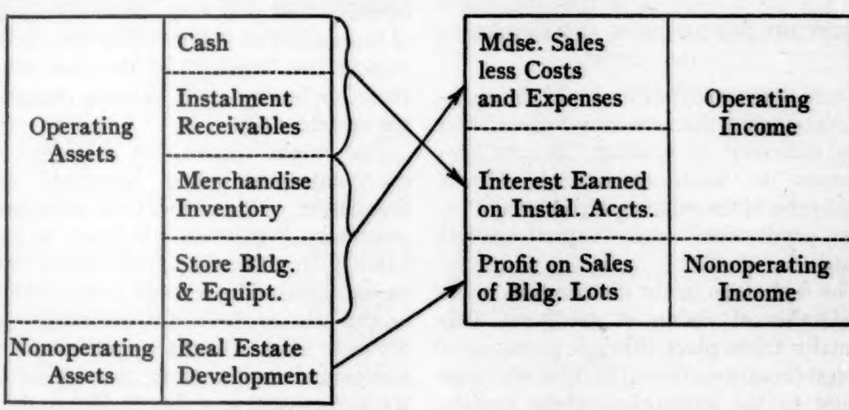
RELATING INCOME ELEMENTS TO ASSET GROUPS

When differing types of income are produced by various groups of operating assets, a question may arise as to whether this fact should be emphasized in the statements. The answer will depend on the circumstances.

In most cases the simplest approach is to consider the aggregate of operating income as the result of the combined use of the aggregate of operating assets, since the over-all result usually is more significant than any subdivision by asset classes.

In other words, it may be considered that for most businesses the utilization of merchandise and facilities (inventories and equipment) entails the collateral extension of credit to customers (accounts receivable) and the carrying of a balance at the bank (cash), and that any interest received on the latter investments may be considered incidental to the main income-producing activity. When such interest is a minor factor in the resuts it is simpler to merge it with other operating income than to identify it separately with certain classes of operating assets.

Some enterprises, however (e.g., instalment furniture houses), may have so large a portion of their operating income in the form of interest on outstandings that correct presentation of the income statement would entail separating "trading income" from "interest income," with each related to the portion of the assets by which it is produced. A possible method of contrasting data in such cases is suggested by the following diagram.



CASH DISCOUNTS

A minor oddity in accounting practice, which requires passing consideration, is the treatment of discounts on purchases and on sales. Presentation of these items

often follows the method of entry in the books of account, that is, purchased discounts "taken" are recorded as income and sales discounts "lost" are treated as expense (or deduction from gross income). Since this treatment ignores the real nature of the transaction, it is impossible to find any suitable place for such items in a financial statement.

The logical view is that the net-price-less-discount is the proper measure of the actual cost or selling price, and that the discounts to be recorded are the ones which are *not* taken, rather than those which are. On this basis, purchase discounts are deducted in arriving at the cost of goods bought; if a discount is offered but not taken, the additional amount paid is set up as a "discount lost," and will be considered as a payment of interest for overtime use of the vendor's money. Similarly, sales are credited in the accounts as though billed net; then any discounts not taken by customers will show up as interest on outstanding accounts receivable.[5]

INCOME DISTRIBUTION AND SOURCES OF CAPITAL

Turning to the opposite side of the financial statements, the accountant should find little difficulty in relating "income distribution" to "sources of capital." This is the obverse of the relationship between "income production" and "capital investment."

The first stage in the distribution is the satisfaction of claims of creditors. This normally takes place through payment of interest (in various forms) to those who loan money to the enterprise. These include holders of short-term notes and mortgages, bondholders, and vendors of merchandise, supplies, and services.

Trade creditors, and some others who allow the use of their capital for short periods, may receive no return on their capital contributions. For example, the typical vendor of operating supplies extends credit from ten to thirty days without any interest charge. This merely indicates a rate of zero interest paid by another for use of his capital. Likewise accrued wages, taxes, and other current obligations represent a "free" capital contribution.

THE GOVERNMENT AS AN EQUITY-HOLDER

Oddly enough, the largest claimant to an income-distribution is not often recognized in the accounts of business enterprises as an equity-holder. This creditor is the government (national, state, or local), which may be regarded as "one of the participants in the fruits of enterprise, its participation taking the form of taxes (on income and profits)."[6]

The burden of this large and insistent demand on income poses a nice question in accounting philosophy. There seems little question that such taxes are a distribution of income, not an element in its production. Should the "equity" of the government therefore be expressed in some manner in the statements?

One might reason, for example, that every enterprise has an "unvalued" asset (consisting of the benefit of government protection, regulation, etc.) and an equal liability (representing government claims on earnings). These could even be shown on the balance sheet.[7] Or, one might value the asset at zero, and set up the equity as a section of the net worth, thus considering the government as a shareholder to the extent of its interest in profits, and reducing *pro tanto* the value of the interests of the other shareholders.[8]

[5] For a more extended discussion of this relatively unimportant subject see the author's article on "Cash Discounts in the Income Statement," *Supplement to Proceedings of the American Association of University Instructors in Accounting*, 1925.

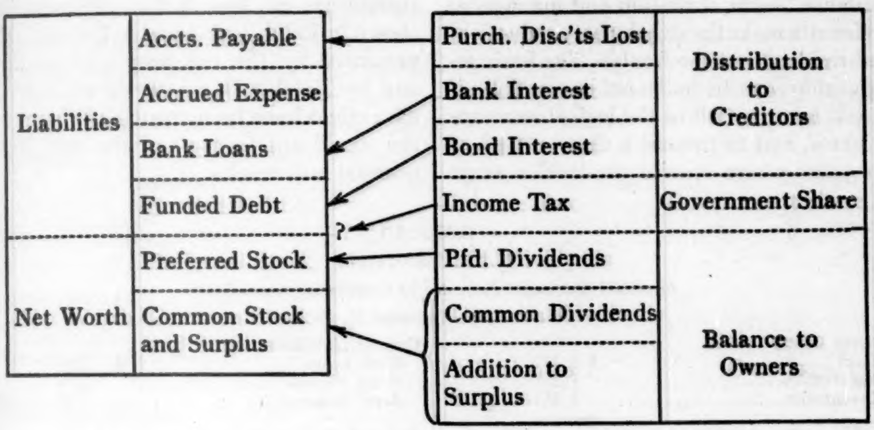
[6] Comment by George O. May in "Fundamentals of Accounting Procedure," *The New York Certified Public Accountant*, November, 1940.

[7] See Figure 1, *Accountants' Handbook*, 1943 edition.

[8] It has been suggested that the growing Federal

SIGNIFICANT GROUP RELATIONSHIPS

Graphically presented, this set of relationships has the following appearance:



Financial statements arranged along these lines would show the following grouping of capital-source and income-distribution factors (the figures are a completion of the statements of the hypothetical D. E. F. Company, begun above).

Equities

Liabilities	
Accts. Payable	$ 260,000
Accrued Expense	325,000
Bank Loans	200,000
Total Current	$ 785,000
Mortgage Bonds	1,000,000
Total Liabilities	$1,785,000
Net Worth	
Preferred Stock	$ 500,000
Common Stock	1,000,000
Surplus	835,000
Total Net Worth	$2,335,000
Total Equities	$4,120,000

(equal to total assets)

debt represents "a large but indeterminate future liability which has not been reflected in (the) accounting statements (of business enterprises)," *Accounting Research Bulletin No. 10,* issued by American Institute of Accountants, June, 1941.

The foregoing comment has been intended to bring out the fundamental structure of the statements, rather than to indicate details of presentation. The important thing is a recognition of inherent relationships. With these in mind, the accountant can proceed to whatever detailed organization of his material is warranted by the circumstances in a particular case. But what-

Distribution

Creditors	
Purchase Discounts Lost	$ 5,000
Interest on Bank Loans	10,000
Interest on Bonds	40,000
Total	$ 55,000
Government	
State Income Taxes	$ 85,000
Federal Income Taxes	375,000
Total	$ 460,000
Owners	
Preferred Dividends	$ 25,000
Common Dividends	150,000
Balance to Surplus	215,000
Total	$ 390,000
Total Income	$ 905,000

(equal to total income produced)

ever the arrangement, the presentation

should clearly emphasize basic structure and relationships.

It may not be important, for example, that the income statement be presented in "balance" form, if custom and managerial preference make the step-by-step reduction-and-residual form preferable. The basic relationships can be indicated successfully if care is taken to follow the logical sequence of items, and to present a clean cut-off at the point where income production stops and income distribution begins.

An example will illustrate this point, as well as some of the others previously made. This is provided by the appended financial statements of the X.Y.Z. Corporation, shown in Exhibits A-1 and A-2, as orginally presented by the company's accountant, and by Exhibit B, which shows how the data might have been arranged to bring out the significant features of the company's position and results.

Exhibit A-1

X.Y.Z. CORPORATION

*Financial Statements Presented by Corporation Accountant**

Balance Sheet—December 31, 1942

Current Assets			Current Liabilities		
Cash	$ 1,274		Bank Loans	$ 300	
Receivables	1,298		Accts. Payable	394	
Inventories	2,581	5,153	Accd. Expenses	710	1,404
Noncurrent Receivables			Deferred Accounts Payable		49
Deferred Accounts	$ 194		First Mortgage Bonds		1,175
Advances to Employes	18	212			
Supplies, Prepaid Expenses, etc.			Capital Stock and Surplus		
Tools and Parts	$ 259		Capital Stock	$10,000	
Stationery	74		Surplus		
Unexpired Insurance	53		Beginning	$ 2,298	
Travel Advances	12	398	Profits	830	
Land and Buildings				$ 3,128	
Not Used in Operations		968	Dividends	1,000	
Plant Equipment			Ending	$ 2,128	
Land	$ 683				
Buildings	5,794		Total Net Worth		12,128
Machy. and Equipt.	8,866				
	$15,343				
Less: Reserve	7,319	8,024			
Patents, Licenses, Goodwill		1			
Total Assets		$14,756	Total Liabilities and Net Worth		$14,756

* Adapted from statements of a manufacturing corporation reproduced in an edition of *Accountants' Handbook*. Data are given in thousands of dollars (000 omitted).

Exhibit A-2

X.Y.Z. CORPORATION

Profit and Loss Statement—Year 1942

Sales, less returns and allowances	$12,920
Cost of sales, exclusive of depreciation	7,895
Gross profit on sales before deducting depreciation	5,025

Selling, administrative, and general expense:		
Advertising expense	$ 819	
Selling expense	1,003	
Royalties paid	220	
Administrative and general expense	974	3,016
Profit from operations before deducting depreciation		2,009
Depreciation:		
Buildings, machinery, etc.	$ 557	
Jigs, dies, and tools	295	852
Net profit from operations		1,157
Other income:		
Interest earned, less paid	$ 12	
Cash discount on purchases	58	
Royalties received	56	
Miscellaneous income	16	142
		1,299
Other deductions:		
Expenses of nonoperating properties, net	$ 77	
Loss on disposal of machinery and equipt	53	
Miscellaneous deductions	17	147
		1,152
Income and profits taxes		322
Net profit for year		$ 830

Exhibit B

X.Y.Z. CORPORATION

*Condensed Financial Statements Arranged for Comparative Analysis**

Balance Sheet—Dec. 31, 1942

Assets		
Current Assets:		
Cash	$ 1,274	
Receivables	1,298	
Inventories	2,581	
Supplies & Ppd. Exp.	398	5,551
Deferred Receivables:		
Customers	$ 194	
Employees	18	212
Plant & Equipment:		
Machy. & Equipt.	$ 8,866	
Bldgs.	5,794	
Land	683	
	$15,343	
Less: Reserve	7,319	8,024
Patents & Goodwill		1
Total Operating Assets		$13,788
Properties Not Used in Operations		968
Total Assets		$14,756

Income Statement—Year 1942

Operating Income		
Sales, Net		$12,920
Cost of Sales		
Matls. & Exp.	$7,835	
Depreciation	852	
Displacements	53	
Royalties	220	8,960
Gross Margin		3,960
Royalties & Int. Rec'd.		114
Total		4,074
Selling & Admin. Expense		
Advertising	$ 819	
Selling	1,003	
General	974	2,796
Net Operating Income		1,278
Nonoper. Income		
Expense of Nonoperating Properties, Net	$ 77	
Misc. Expense, Net	1	78
Total Income		1,200
Creditors' Share		
Purch. Discts. Lost	$ 2	
Bank Loan Interest	9	
Bond Interest	37	

Equities			Total Interest		48
Current Liabilities:			Avail. for Income Taxes & Profit		1,152
Accts. Payable	$ 443		*Government's Share*		
Accd. Expense	710		Income Tax		322
Bank Loans	300	1,453	*Owners' Share*		
Funded Debt:			Net Profit for Year		830
Bonds		1,175	*Dividends Paid*		1,000
Net Worth:			*Balance to Surplus*		
Capital Stock	$10,000		Deduction (red)		$ (170)
Surplus	2,128	12,128			
Total Equities		$14,756			

* Required data partly estimated if not shown in adequate detail in published statement.

From Exhibit B the following facts can be developed as to the relationship of capital and income factors:

(1)	Total operating assets of $13,788,000 produced sales of $12,920,000, turning over at annual rate of	0.9 times
(2)	Total operating assets of $13,788,000 produced net operating income of $1,278,000, an earning rate of	9.3%
(3)	Nonoperating properties valued at $968,000 caused a net loss of $78,000, at a rate of	8.1%
(4)	Total assets of $14,756,000 produced total income of $1,200,000, an earning rate of	8.1%
(5)	The margin of operating income of $1,278,000 on sales of $12,920,000 was at the rate of	9.9%
	which, with a turnover of 0.9 time, produced an earning rate (as noted above) of	9.3%
(6)	Total income (from all sources) of $1,200,000 was divided:	
	To creditors (in interest) $48,000 or	4.0%
	To government (in income tax) $322,000 or	26.8%
	To owners (balance) $830,000 or	69.2%
(7)	Interest paid to creditors was at these rates:	
	on bank loans (at year-end), $9,000 on $300,000, or	3.0%
	on bonds (at year-end) $37,000 on $1,175,000, or	3.1%
	on total debt (at year-end) $48,000 on $2,628,000 or	1.8%
(8)	New profit for year, $830,000 represented a return	
	on capital stock of $10,000,000 at a rate of	8.3%
	on year-end net worth of $12,128,000 at a rate of	6.9%
(9)	Margin of net profit to sales was	9.0%
(10)	Dividends were 10% of capital stock and 120% of net profits	

YEAR-END RATIOS NOT ALWAYS SIGNIFICANT

It should be noted that these ratios are based on comparisons of results for a year with the capital investment at the year-end only. This procedure is satisfactory for purposes of illustration, but it has obvious limitations in practice.

Analysts should bear in mind that the significance of the indicated relationships *in general* does not insure the significance of such relationships *at any particular point of time*. In other words, it does not follow that because operating assets produce operating income, the operating assets being utilized at any one date can be assumed to have produced the operating income of any specific prior accounting period.

Financial analysis sometimes goes astray in assuming that the balance sheet at the year-end represents the average condition prevailing throughout the year, a condition which in some respects is usually not the case. An average balance sheet for the entire year would provide a better basis of comparison.

Despite this limitation in the use of published financial statements for curbstone interpretation, it is well worth while to establish a definite statement form which

will develop the always-essential elements in a way that makes analysis and interpretation easiest. It is worth while particularly because the manager of a business, becoming accustomed to this presentation, learns to think in intelligent terms about capital volume, turnover, margin, and rate of return as they affect his operations.

For managerial use the accountant will prepare frequent analytical statements—monthly, or even weekly, if need be—and the vital ratios will soon become an indispensable part of the managerial appraisal of results and possibilities. The analyst who works with such an annual financial report will at least be dealing with the essentials, regardless of whether his data are adequate in themselves to support accurate conclusions on all points of interest.

The organization and arrangement of accounting data for such purposes is an important service, and merits more emphasis than it has generally received.

THE NAME OF PACIOLO

Alfred V. Boursy

The cause for this article is that very moot question of long standing—the correct spelling of Paciolo's name. My own interest in this question dates back to some years ago when the matter of the many variant spellings was first called to my attention by Dr. Edward Peragallo, author of *Origin and Evolution of Double Entry Bookkeeping*. (1) It was more vividly renewed three years ago, when Professor Thomas W. Byrnes of Columbia in a letter to Dr. Peragallo brought forward the same question (2), and the culmination came with Dr. Peragallo's review of R. Emmett Taylor's splendid biography of Paciolo, *No Royal Road*. (3)

My own interest in Paciolo is purely culturally historic and linguistic and the present attempt is entirely due to the request and desire of Dr. Peragallo to wrest the spelling of the name of a great figure in the history of accounting from the jungle-like forest of confusion into which it has fallen. To Dr. Peragallo alone, and to his effort of placing at my disposal the necessary material to form a linguistic evaluation, belongs the credit.

(1) See numbered references at end of article.

As Professor Taylor shows in regard to "the matter of names" (4) in Paciolo's time, they were often of an elusive shiftiness. Indeed the Renaissance in the flush of her new learning of Greek and Latin was a mother of names. Even Paciolo's great contemporary Erasmus could not forego doing some slight tampering with his own. Then we have the outstanding examples of Schwarzerd (Blackearth) who became by Greek translation the famed Melanchthon, and of von Hohenheim, who became the great medical revolutionary, Paracelsus. Most ridiculously interesting perhaps is the case of the now unknown German gentleman Mr. Blei (Mr. Lead), who became the distinguished Latin Mr. Plumbum (Mr. Lead). When his grandchildren had forgotten their Latin they wrote the next sensible thing to it, the German Mr. Pflaumbaum (Mr. Plumtree). And to be sure the transformation from lead to a plumtree is quite a piece of alchemy. However, in the case of Paciolo's name no such shiftiness or elusiveness exists, but rather a clear-cut consistency that never did warrant the morass of spelling to which it has fallen heir.

In the preface-dedication of his *Summa* to the Duke of Urbino he calls himself "Frater Lucas de Burgo Sancti Sepulchri, Ordinis Minorum" (Brother Lucas of Borgo of the Holy Sepulcher, of the Order of Friars Minor). (5) With his use of that name any Paciolo friend is well acquainted nor does it present any difficulty, since throughout the Middle Ages and the Renaissance and later it was customary to use the name of one's birthplace. The only item of linguistic interest is the change from the Latin to the Italian "Fra Luca da Borgo San Sepolcro" and in this the change from *u* to *o* in Borgo and Sepolcro. However, when we come to the surname *Paciolo* the difficulty begins. It became the ball in an ever-increasing spelling juggle-act so that by today no less than thirteen different spellings, and maybe more are current in authoritative works.

Variations in Spelling*

1. "Master Luca di Bartolommeo Paciuolo."
2. "Antonius Massus Paccivoli."
3. "Antonio Massi Pacioli."
4. "Lucas Paciol."
5. "Fra Luca Pacciolo."
6. "Fra Luca Pacciolo."
7. "Lucas Paccioli."
8. "Fra Luca Pacioli."
9. "Fra Luca Pacioli."
10. "Fra Luca de Pacioli."
11. "Luca Pacioli."
12. "Lucas Paciuoli."
13. "Lucas Paciuolo, von welchem weder das Geburts-noch das Todesjahr. . . ."
14. "Paccioli."
15. "Luca Paccioli."
16. "Fra Luca Pacioli."
17. "Luca Pacioli"; "Paciolo"; "Paciuolo."
18. "Luca Pacioli"; "Lucas Paciolus."
19. "Luca or Lucas Paccioli; Pacioli or Paciuolo."
20. "Lucas di Borgo Pacinolo; Paccioli or Pacimolo."
21. "Patiolis."
22. "Paciuolo"; "Paciolo."
23. "Paciolo."
24. "Paciolo."
25. "Paciolo."
26. "Paciolo."
27. "Paciolo."

Within this list of twenty-seven instances adduced above are thirteen different spellings. In Professor Taylor's splendid volume occur no less than eight of the thirteen, although he himself consistently uses "Pacioli." Now, when eminent authorities disagree so widely in the spelling of a name, it is remarkable that I have at hand only two instances, Staigmüller (7) and Besta (8), in which the writers, on the basis of some evidence, tried to justify their spelling as correct. In neither of these cases was the problem tackled fully and never on factual linguistic analysis and evidence. To bring some clarification into

* References for the various forms of spelling are as follows:

1. Letter from the office "Custodie et Balie" of the city of Florence to the Captain and Commissioner of Borgo San Sepolcro in litigation between Paciolo and Pietro Felicaia, October 12, 1512. (See Taylor, *op. cit.*, p. 375.)
2. (*Ibid.*, p. 11.)
3. (*Ibid.*, p. 374.)
4. Tory. (*Ibid.*, p. 276.)
5. Gaye. (*Ibid.*, p. 405.)
6. Pungileoni. (*Ibid.*, p. 408.)
7. Jäger. (*Ibid.*, p. 407.)
8. Mancini. (*Ibid.*, p. 407.)
9. Marini-Franceschi. (*Ibid.*, p. 407.)
10. Morison. (*Ibid.*, p. 408.)
11. Winterberg. (*Ibid.*, p. 411.)
12. Staigmüller. (*Ibid.*, p. 410.) See Reference (6) at end of article.
13. Staigmüller. See Reference (6).
14. Ulysse Chevalier, *Repertoire des sources Historique du Moyen Age* (Paris, 1905).
15. Larousse. (*Nouveau Dictionnaire Encyclopédique*)
16. *Der Grosse Brockhaus* (Leipzig, 1933).
17. *Enciclopedia Treccani.*
18. *Encyclopedia Brittanica*, 14th ed.
19. *New International Encyclopedia*, 2d ed. (New York, 1935).
20. *Encyclopedia Americana*, 1940 ed.
21. Fabio Besta, *La ragioneria*, Milano, 1929; footnote on p. 361.
22. Thomas W. Byrnes and K. Lanneau Baker, *Do You Want To Become an Accountant?* (New York: Frederick A. Stokes Company, 1940). See Reference (2) at end of article.
23. Besta, *op. cit.*, pp. 360–376.
24. Plinio Bariola, *Storia della ragioneria* . . . . (Milano, 1897), p. 366.
25. P. G. A. De Waal, *Van Paciolo tot Stevin*, 1927.
26. Henry Rand Hatfield, "An Historical Defense of Bookkeeping," *Papers and Proceedings of the American Association of University Instructors in Accounting*, June, 1924.
27. Peragallo, *op. cit.*

this forest of confusion, and some future uniformity to perhaps the most lacerated name of the entire Renaissance, is the purpose of this article.

First let us examine Paciolo's name as he himself wrote it. In the title page of his "Euclid" (9), written in Latin, he calls himself "*Lucas Paciolus.*" So also in all his Latin writings and in any still existent Latin documents (10) in which this name is mentioned, the spelling is "*Paciolus.*" We must accordingly assume as one conclusion that the only correct Latin spelling of his name is "*Paciolus.*"

The only argument against this spelling is his Latin testament. (11) However, this single argument contradicts itself. First, the testament was not written by Paciolo himself, but by the law-clerk Bartolomeo, on dictation by Paciolo. Second, in the spelling of the name, Bartolomeo, as prima-facie evidence, made not only one but two mistakes. First he wrote "Pacciolus" with the double *c* and then he clinched his evident ignorance of the correct spelling by twice writing "Pacciuolus." Both spellings are phonetically Italian and furnish intrinsic evidence both of dictation and of the clerk's ignorance and carelessness as to the correct spelling. Accordingly the correct Latin spelling must stand as "*Paciolus.*"

As to the Italian spelling, Paciolo writes in his own hand: "*Paciuolo*" and "*Paciolo.*"(12) Aside from this perfect linguistic consistency with the Latin spelling, we must assume that Paciolo somehow knew his own name.

Let us now analyze linguistically the correlative Latin and Italian spellings. The Italian ending *o* and the Latin ending *us* are perfect correspondents (Lat. bon*us*—It. buon*o*). Thus, disregarding momentarily any other linguistic intricacy, the perfect Italian correspondent to the Latin "*Paciolus*" would have to be "*Paciolo,*" as indeed he himself wrote it as a variant to "Paciuolo." The only inconsistency therefore that apparently still exists is between his own two Italian spellings of "Paciolo" and "Paciuolo." Now, in Italian the letters *i* and *u* have a consonantal quality when they appear in a diphthong: they melt into the accompanying vowel and thus form what is called a semivowel. Accordingly, in Italian the difference in the pronunciation of "Paciolo" and "Paciuolo" is not an essentially striking one, as can readily be seen from the two phonetic spellings in the dictated Latin testament.* Besides this phonetic similarity of the *uo* and *o*, we still have the following: The Latin *o*, as in b*o*nus, *o*vus, s*o*nare, frequently became in Italian that melting diphthong *uo*, as in b*uo*no, *uo*vo, s*uo*nare. But if such an *uo* ends an accented syllable it is merely a replacement of the simple vowel *o*, a so-called variant, and in both the spoken and the popular written language the simple vowel *o* increasingly replaces the diphthong *uo*, e.g., buono = bono; uovo = ovo; suonare = sonare. (13) Thus, Paciolo in spelling his name both "Paciuolo" and "Paciolo" was not inconsistent but merely made use of a common idiosyncracy of the Italian tongue. Today he would in all likelihood consistently write "Paciolo" and having once written that he would and could never write "Pacioli."

It is in this ever recurrent and faulty spelling "Pacioli"—in the ending *i*—that the real difficulty and misunderstanding lie. By grammatical nature the ending *i* must occur in the name according to circumstances of case and number, just as we must upon occasion write in English of the name Smith: Smith's and the Smiths. Thus a severe misapprehension as to the ending of Paciolo's name has brought about a confusion that must be cleared up.

* In pronouncing the name the *a* is broad as in father and *ci* is sounded like *chi* in children but with the *e* sound of *i* melting into the following *o*; accent is given to the first *o*—Pah-chió-lo.

"Pacioli" occurs both in his Latin and his Italian texts.

As an example for the Latin I quote: ". . .Fratribus Ambroxio et Zinipero Fratrum dicti ordinis eiusdem testatoris nepotibus et Filiis Petri olim Paccioli. . ."(14) "Paccioli" here is clearly a genitive: ". . . to the sons *of Peter Pacciolus* deceased. . ." In simple words: The Latin "*Paciolus*" has as genitive singular and also as nominative plural the form "Pacioli." Therefore any "Pacioli" that occurs in any Latin writing can only be a genitive singular or a nominative plural and leaves as the correct Latin spelling of the name "*Paciolus*."

As an example of the Italian form "Pacioli" I shall take Paciolo's own phrase from his petition to the Doge of Venice "Luca de Pacioli." (15). In Italian the plural of *Paciolo* is *Pacioli*. Thus, when Paciolo wrote "Luca de Pacioli" he wrote "Luca of the Paciolos," that is, of the Paciolo family. In his own hand the name thus was "Paciolo" and does not become Paciolos or Pacioli. From a linguistic standpoint it is utterly impossible that once he had written Paciuolo or Paciolo he could ever write Pacioli except as a plural and in the sense indicated above. It is true that because of the custom of calling persons by their given name and then adding "de Pacioli," "de Belfolci," ("of the Paciolos," "of the Belfolcos") many families in the course of time simply adopted the *i* ending, but once having adopted that ending they could never any more use *o*. However, in neither the Latin nor the Italian writings of Paciolo is there any warrant for the spelling "Pacioli," but on the contrary we have in Paciolo's own hand, as in the examples above, the definite opposites "Paciuolo" and "Paciolo."

Paciolo's own spelling is definitely and distinctly corroborated by contemporary and later evidence and authority. We have the legal letter from the office "Custodie et Balie" of the city of Florence written in 1512. (16). He is called Luca di Bartolommeo Paciuolo," "Luca (son) of Bartolommeo Paciuolo." This is the singular form and the ending remains *o*. We have in the dedication of the architecture section of the *Divina*: "Fra Luca Paciuolo." (17) We have in the dedication to Soderini of Part III of this same *Divina* as printed in 1509 "Luca Paciolo." (18). In "*Euclidis Megarensis*," printed by Paganini in 1508, we have "Luca Paciolo." (19) Baldi writes: "Fu de la famiglia de' Paciuoli." (20) The plaque which the citizens of his home town put on the house of his birth reads: "A Luca Paciolo . . . ." (21) There is no question as to the ending of his name. If *o* is once used, in the nature of the Italian language no stretch of the imagination nor authoritative repetition of error can make that *o* an *i* except as a plural.

The other variant spellings, Paccivoli, Pacinolo, Pacimolo, etc., are all evident mistakes of careless secondhand transcription, of misreading, or of phonetic misapprehension. The mistake of the double *c* has already been traced to careless phonetic writing. In regard to the *v* spelling there is this to note: Up into Galileo's time and later the *v* and *u* were written interchangeably, and an examination of the facsimile title page of Euclid (9) will prove this abundantly of Paciolo's time. However, in spite of that interchange in writing, even a cursory examination of the name "Paciolo" leaves no doubt of the *v* error. The *n* and *m* are such patent mistakes of bad copying that they do not even need comment.

In conclusion, it is interesting to note that those scholars who bothered most with the name, not on the basis of linguistic analysis but on written evidence alone, came to the same conclusion. (12). We must accordingly leave as the correct spelling of the name the Latin "Paciolus" and the Italian variants, "Paciuolo" and "Paciolo." Of these latter two, the spelling

"Paciolo," used by Paciolo himself and by his contemporaries and in direct accord with the development of the Italian language, is by far the more preferable. To this his fellow citizens of Borgo San Sepolcro, who should know, bore witness, when in 1878 they wrote upon the plaque on his birthplace: "A LUCA PACIOLO." (21)

References

(1) New York: American Institute Publishing Company, Inc., 1938.

(2) February 12, 1940: "You probably noted that I changed the spelling to "Paciolo" on pages 7 and 9 [Thomas W. Byrnes and K. Lanneau Baker, *Do You Want to Become an Accountant?*—New York: Frederick A. Stokes Company, 1940] to conform with my idea and yours of the correct spelling of the monk's name. But the Stokes editorial department quotes as its authority for spelling the name Paciuolo, the New International Encyclopedia and Mr. Walden states that there are two alternatives and neither the way I spell it. Do you know of any authority on the matter? . . ."

(3) Chapel Hill: The University of North Carolina Press, 1942.

(4) *Ibid.*, p. 10.

(5) *Ibid.*, p. 189.

(6) H. Staigmüller, "Lucas Paciuolo, eine biographische Skizze," in *Zeitschrift für Mathematik und Physik*, Bd. 34, "Historisch-literarische Abtheilung," 1889, p. 85. (It seems that Professor Taylor either made a mistake or deliberately changed Staigmüller's spelling of "Paciuolo" to conform to his own preference. In a case of so much confusion, and in an otherwise splendid volume, this is a serious error or liberty. Evidence of such liberty-taking runs throughout the entire volume and makes any spelling taken from the volume, except from facsimiles, questionable and untrustworthy.)

(7) Staigmüller, *loc. cit.*

(8) Fabio Besta, *La ragioneria* [Milano: 1929], pp. 361–362.

(9) Taylor, *op. cit.*, p. 313.

(10) Staigmüller, *loc. cit.*

(11) *Ibid.*

(12) *Ibid.*; Besta, *op. cit.*, p. 361; Taylor, *op. cit.*, p. 368.

(13) Trabalza e Allodoli *La Grammatica degl'Italiani* (Firenze: F. Le Monnier, 1938), p. 9. "Le vocali *i* ed *u* possono, nella pronuncia, fondersi così strettamente con una delle altre, da formare con essa un unico suono, il dittongo: l*iè*to, f*iù*to, p*ià*no, f*iò*re, In questi casi la funzione dell'*i* e dell'*u è* piuttosto di consonante che di vocale, onde il nome di semivocale dato ad esse quando facciano parte di un dittongo. Può aversi dittongo anche dall'unione de *i* e *u*; p*iù*, g*ui*da, f*iù*me.

I dittonghi *uo*, *ie*, che possono stare in fine di sillaba accentata invece delle vocali semplici *o*, *e*, si dicono mobili: buòno (bòno), intiéro (intéro). Nella lingua parlata, ed anche scritta ma d'intonazione popolare e riproducente la comune conversazione, la frequenza di tali dittonghi va diminuendo; onde occorrono più spesso òvo, accòra, giòco che non uòvo, accuòra, giuòco."

(14) Taylor, *op. cit.*, pp. 373–374.

(15) Staigmüller, *loc. cit.*; Taylor, *op. cit.*, p. 362.

(16) *Ibid.*, p. 375.

(17) *Ibid.*, p. 268.

(18) *Ibid.*, p. 347. (See Reference (6) and compare pages 279 and 347.)

(19) Besta, *op. cit.*, p. 361.

(20) Staigmüller, *loc. cit.*

(21) Plinio Bariola, *Storia della ragioneria italiana premiata al concorso della Società storica lombarda* (Milano: Tip. Ambrosiana di Cavalli, 1897), p. 374.

WARTIME ACCOUNTING PROBLEMS

Hiram T. Scovill

In 1917 and 1918, when the United States was participating in World War I, accountants were concerned primarily with the problems arising from the application of the income and excess profits taxes and the special war tax, all of which were practically new to American accountants. Aside from these tax laws, accountants did not seem to be concerned greatly from the professional point of view with war problems.

In scanning the various monthly issues of the *Journal of Accountancy* through 1916, 1917 and 1918, one would hardly realize that the United States was at war except for a very few articles and editorials that appeared mostly in the latter part of 1918. Prior to October, 1918, there were articles on war contracts and cost accounting, cost-plus contracts, and overhead distribution on cost-plus contracts. In October, 1918, there appeared in the *Journal* an article entitled "Accountants and the Food Administration" and another on "The Accountants' Bit in the American Expeditionary Forces." In November, 1918, at

the time of the Armistice, an article dealt with "Accounting for Cantonment Construction."

The editorials in the *Journal* during War I do not seem to reveal any very serious problems for accountants resulting from the war. Only two items are found which show much concern in that direction. In May, 1918, an editorial on "Government's Compensation for Accountants" lamented the fact that the Signal Corps was offering $6,000 a year for accountants with experience and was thus drawing accountants away from the professional ranks. In September, 1918, an editorial told of exemption (deferment) for accountants because of income tax work. This covered the proposal from some official quarters to exempt accountants from military service so that they might be able to assist in preparing intricate tax returns which were anticipated as a result of the complicated tax laws recently passed.

The accounting problems associated with the present world war are more numerous than those of the war which ended in 1918. The cost-plus contracts for armaments, cantonment construction, and other supplies and equipment for World War I dealt with cash outlays which were not necessarily supported by cost records as they are used at the present time, when modern cost accounting principles are being applied in many different types of cost-plus contracts and renegotiation transactions.

Accounting problems in war contracts not only affect the cost accountant, the comptroller, and other industrial accountants, but they also affect in many respects the work of the certified public accountant who reviews the accounting entries and prepares reports and certificates for the benefit of stockholders and use by various governmental bureaus and agencies. This paper therefore can be addressed more to the professional accountant than to the industrial accountant, although the principles covered are ones that affect all who prepare or interpret financial statements.

The several subjects to be considered have received intensive study by the American Institute of Accountants through its Committee on Accounting Procedure and, in one or two instances, also by its Committee on Auditing Procedure. Bulletins have been published on some of the subjects and studies on others are in the formative stages. Some of the subjects also have received the attention of the Securities and Exchange Commission.

COST-PLUS-FIXED-FEE CONTRACTS

The Committee on Accounting Procedure of the American Institute of Accountants in Bulletin 19 makes these recommendations:

"(1) Fees under CPFF contracts may be credited to income on the basis of such measurement of partial performance as will reflect reasonably assured realization. One generally acceptable basis is delivery of completed articles. The fees may also be accrued as they are billable, under the terms of the agreement, unless such accrual is not reasonably related to the proportionate performance of the aggregate work or services to be performed by the contractor from inception to completion.

"(2) Where CPFF contracts involve the manufacture and delivery of products, the aggregate amount of reimbursable costs and fee is ordinarily included in appropriate sales or other revenue accounts. Where such contracts involve only services, or services and the supplemental erection of facilities, only the fee should ordinarily be included in revenues.

"(3) Unbilled costs and fee under such contracts are ordinarily receivables rather than advances or inventory, but should preferably be shown separately from billed accounts receivable.

"(4) Offsetting of government advances

on CPFF contracts against amounts due from the government on such contracts is permissible only to the extent that such items may under the terms of the agreement be offset in settlement, but a more desirable procedure in most cases will be to offset the advance against the receivable only if that is the treatment anticipated in the normal course of business transactions under the contract. In case of offset, the amounts offset should be adequately disclosed."

The principal argument that arose in the Committee when the draft for this bulletin was under discussion was on the question, "Is it permissible to accrue the fee on the contractor's books before he makes delivery of the articles produced under the contract?" The conclusion was reached that the fee could be accrued as soon as it becomes proper to bill the government for expenditures made on account of a given contract even though delivery has not been made of any part thereof. In the CPFF contracts delivery does not seem to be the deciding factor in establishing a legal charge against the customer. Such charge is possible from time to time as work progresses and the contractor spends money on the contract.

RESERVES FOR POSTWAR UNCERTAINTIES

Almost concurrently the Institute's Committee on Auditing Procedure and the Securities and Exchange Commission issued pronouncements dealing with reserves necessitated by wartime contingencies. In December, 1942, Bulletin No. 15 of the Committee on Auditing Procedure was issued under the title, "Disclosure of the Effect of Wartime Uncertainties on Financial Statements." The SEC on January 8, 1943, issued Release No. 42 in its Accounting Series "indicating the disclosure to be made in financial statements with respect to reserves established to provide for possible losses and other contingencies arising out of existing war conditions."

Both the Institute and the SEC realize that unusual types of contingencies are likely to arise as a result of war and war contracts, and that adequate reserves therefor should be created and fully disclosed in the financial statements. The Institute bulletin mentions uncertainties arising from renegotiation of war contracts both on prime contracts and subcontracts; certain relief provisions of the Revenue Act of 1942 which are subject to varied interpretations; the decision of the War Production Board and other governmental agencies to discourage or forbid the taking of physical inventories in war plants where a shutdown might be required; war damage when insurance adjustments have not been completed; amortization of wartime facilities based on an estimated term of years; and accelerated depreciation of facilities not subject to special amortization.

After giving attention to these uncertainties, the Committee on Auditing Procedure of the Institute makes these observations and recommendations:

"In view of these and other major uncertainties engendered by the war, an important question arises as to the manner in which they may best be brought to the attention of those interested. Ordinarily, the financial statements are the appropriate place for disclosure. Depending upon the circumstances, the disclosure may take the form of a footnote setting forth such pertinent information as may be available regarding matters which are material. In other cases, where the effects of renegotiation and other matters are reasonably determinable, reserves may be established under the principles set forth in Accounting Research Bulletin No. 13.

"In some cases the effect of the uncertainties may be such that the companies in question will desire also to direct attention thereto in the text of their reports to

stockholders; in some instances the conditions may be such as to suggest the use of a general footnote to the financial statements, indicating that the statements are provisional in character and that the directors have exercised their best judgment as to such matters as renegotiation, taxation, cost accounting under government contracts, and the provision of reserves.

"Despite all uncertainties, however, financial statements are essential. It is necessary to furnish reports to stockholders which are as informative as possible. Tax returns must be prepared and taxes paid. These conditions emphasize the value of an independent review of the judgment of the directors and of the fairness of disclosure by an independent public accountant as to matters coming within his purview.

"DISCLOSURE IN AUDITOR'S REPORT

"The necessity of disclosure of, or emphasis on, the existing uncertainties, in the independent auditor's report presents a further problem. The auditor may feel in some instances that disclosure in the financial statements (of which the footnotes are an integral part) should be supplemented by mention thereof in his report. Exceptions in the report should be avoided so far as reasonably possible, particularly as to matters over which the client has no control or which the client cannot correct.

"With respect to material uncertainties, three types of situations, among others, may be contemplated:

(1) The case in which the auditor believes that the financial statements, so far as possible, present fairly the position and the results of operations, but feels that the uncertainties are such that special attention should be drawn to them in his report, as well as in the statements themselves, but without taking an exception.

(2) The case in which one or more uncertainties are such as to require an exception.

(3) The case in which the cumulative effect of the uncertainties is so great that no opinion is possible, although the auditor may be able to make a statement as to the extent to which he approves the statements and the reasons for omitting the usual opinion on the statements as a whole.

"Each independent public accountant will, of course, prepare his report to meet the circumstances peculiar to the particular case and, accordingly, your committee does not propose any specific form."

Release No. 42 of the SEC, prepared by the chief accountant, advises corporations under its direction to show clearly all such reserves. It says, "While the instructions permit the grouping of special contingency reserves, it would be improper, in my opinion, so to group reserves of the character under discussion or to combine them with other reserves as to fail to disclose clearly the various types of war contingencies and conditions for which reserves have been established.

"Classification and description of the charges made in establishing such reserves should likewise be given careful attention. . . . Where the offsetting charges are not made to the profit and loss or income statement, it will be noted that the schedules required in support of reserves call for a clear description of the circumstances. Where the offsetting charges are made to the income statement, it will be noted that Rule 5–03 requires the amounts, if significant, to be stated separately and clearly described, unless properly includible under the caption 'Cost of Sales,' which caption the rule does not require to be subdivided."

That the SEC is mindful also of the financial as well as the accounting aspect of reserves is indicated by the phraseology of

the closing paragraph of Release No. 42.

"Reserves of the character under discussion may in some cases indicate a future need of cash, as for example in the case of reserves for separation allowances. While the provision of funds to meet necessary expenditures is not a matter of accounting policy, it may be appropriate to point out that the mere establishment of a reserve will not of itself ensure the accumulation and availability of such liquid funds as may be required. Where such future cash requirements exist, independent consideration should be given, as a matter of financial policy, to the desirability of taking additional steps toward providing such funds, as by 'funding' the reserve through accumulation and possibly segregation of cash or liquid assets equivalent to the reserves established."

"V" LOANS

The nature of "V" loans which create liabilities to banks for a reasonably short period is such as to cause some accountants and business executives to wonder whether they should be classed as current liabilities. The Research Department of the American Institute of Accountants issued an opinion early in 1943 to the effect that such loans should in general be classed as current liabilities, although there may be numerous cases in which the most informative presentation will be in an intermediate category between current and fixed liabilities, or in the current liability section as a separate item, added to the total of all other current liabilities.

INVENTORIES

Two principal questions seem to be before accountants at this time with respect to inventories: (1) Which of the three basic costing procedures should be followed, and (2) To what extent may deviations be made in so-called standard auditing procedure if physical inventories are not taken in war industries?

With respect to costing procedures, the American Institute Committee on Accounting Procedure has not as yet issued a bulletin on the subject, but it is expected soon to coöperate with the NACA in drawing up some principles based on the results of questionnaires and other relevant data. Replies to questionnaires already sent out by the Institute Committee seem to indicate[1] that "Of the three costing procedures —'first-in, first-out,' average costs, and 'last-in, first-out'—approximately one-half of the concerns replying used average costs, whereas slightly over one-fourth used 'first-in, first-out,' and slightly under one-fourth used 'last-in, first-out' (or alternatively, a similar basis whereby the cost of sales reflected reproduction costs rather than historical costs). It was also observed, moreover, that there was not the same degree of consistency among all the users of one or the other of these costing procedures in respect of their indicated industrial characteristics; the following situation, for example, was developed:

"The concerns utilizing the 'last-in, first-out' costing procedure (or alternatively, other procedures effecting reproduction costs in cost of sales) report preponderantly the existence of a pronounced affinity between the movements of sales prices and the changes in reproduction costs. Companies using average costs as their costing procedure, while not reflecting so high a degree of homogeneity as those using 'last-in, first-out,' nevertheless in general give justification for the costing procedure followed by them by reporting that changes in reproduction costs were reflected in changed selling prices—albeit after a lapse.

"Of companies reporting the use of the 'first-in, first-out' method, however, two-thirds, notwithstanding the costing procedure followed, reported that their sales

[1] *Journal of Accountancy*, January, 1943, pp. 46–48.

experience indicated that reproduction costs were reflected in changed selling prices, although after a period of time, whereas some—again notwithstanding the costing procedure followed—even reported a quick affinity between reproduction costs and selling prices.

"It may be inferred, as to this group, that in certain cases no doubt correction—after a fashion—may have been made through the provision of inventory reserves."

Dr. Charles J. Gaa, in a recent bulletin published by the Bureau of Economic and Business Research of the University of Illinois, concludes that over a 20-year period there is not much difference in the effect on amount of income tax among the three more common costing procedures (1) First-in, first-out, (2) Last-in, first-out, and (3) Average cost. Any advantage in this respect seems to rest with the average-cost method.

DEVIATIONS IN AUDITING PROCEDURE—INVENTORIES

In those cases in which industrial concerns, under encouragement from the War Production Board, Security and Exchange Commission, or some other agency, have not taken a physical inventory, the independent public accountant must find some means of complying with the procedures established in the bulletin *Extensions of Auditing Procedure*[2] and its amendments, or disclose in his certificate the extent to which satisfactory verification of inventories has been impossible.

The Committee on Auditing Procedure of the American Institute of Accountants says in Bulletin No. 17 (December, 1942), "Observation or tests of physical inventories by the independent public accountant, where practicable and reasonble, were recognized as generally accepted auditing procedures in *Extensions of Auditing Procedure*. Under a subsequent amendment to this bulletin, the failure to make such physical tests was held to require disclosure in the short form of report regardless of whether they are practicable and reasonable and even though the independent accountant may have satisfied himself by other methods."

The bulletin continues with these observations: "Hence, when the failure of a client to make a physical check of its inventories (either at the year-end or on a staggered basis throughout the year) precludes observation or physical tests by the independent accountant, this represents a departure from generally accepted auditing procedures which should be disclosed in the section of the report dealing with the scope of the examination, regardless of alternative procedures undertaken and regardless of whether the accountant has otherwise satisfied himself as to the fairness of the inventory amounts."

TREASURY TAX NOTES

United States Treasury tax savings notes have been purchased by corporations for the purpose of financing Federal income tax payments. In general one would assume that such investments, being of a temporary character, would be listed under current assets in the balance sheet. This is the preferred procedure. It is recognized as acceptable procedure, however, that such notes may be shown on the balance sheet as a deduction from the accrued liability for Federal income and excess profits taxes. This is a marked deviation from accounting principles and practices relative to offsetting assets against liabilities in the balance sheet of a going concern. It is permitted in this case because of the restrictions surrounding the use and conversion of such notes, and the great likelihood that they will be used only for meeting tax obligations. In other words, they are treated about the same as a prepayment of

[2] American Institute of Accountants, 1939.

the tax. Bulletin No. 14 of the Committee on Accounting Procedure made such a recommendation with respect to Series A and Series B of the tax notes. Later, when Series C was issued with slightly more liberal provisions with respect to use, the Committee made an informal statement through the *Journal of Accountancy* (January, 1943, page 2) which sanctioned similar treatment for Series C notes. In any case, however, the Committee would make it clear that such approval should not be interpreted as in any way relaxing or modifying the general rule against offsetting assets against liabilities.

PAY-ROLL DEDUCTIONS FOR INCOME TAXES AND OTHER ITEMS

With the advent of pay-as-you-go income tax legislation the need for considering income-tax and other pay-roll deductions is likely to increase. The problems connected with pay-roll deductions, however, are largely ones of accounting system and procedure and not of accounting principles.

Two questions confront the public accountant and the industrial general accountant with respect to such items, and especially with respect to income tax withheld at the source in accordance with the most recent legislation. They are: 1. Is it necessary for an employer to deposit in a special bank account the amounts withheld from employees for such tax purposes? 2. What is the proper balance-sheet interpretation of such funds when they are segregated by the employer, regardless of whether he is legally required to do so?

Although the first question is purely legal, it is of such a definite type that a business executive or auditor should have the answer readily available when needed. The American Institute of Accountants has obtained assurance from executives of several New York banks that "there is no legal requirement for an employer to deposit amounts withheld on account of the Victory Tax in a separate bank account, any more than there has been for social security deductions. Nevertheless, some employers are in fact opening special bank accounts for this purpose, probably either (1) to insure the employer that the funds will be available for payment to the government when due, or (2) to recognize a moral obligation to keep amounts withheld from employees intact and not to commingle them with the employer's own funds."

As to the balance-sheet presentation, it seems that even though such amounts of taxes withheld are deposited in a general bank account the amount of such withholdings might preferably be shown separately as a current asset. On the other hand, however, it is contended that even when such tax deductions are deposited in separate bank accounts they can with propriety be merged with general cash into a single cash item in the balance sheet. In any case the amounts withheld from employees for transmittal to the government or other agency should be shown in the balance sheet as a current liability.

POSTWAR REFUND OF EXCESS PROFITS TAX

Treatment of excess profits taxes and the postwar refund arising therefrom has caused several questions to arise relative to their location and the extent of disclosure in the financial statements of corporations. The American Institute of Accountants deals with the subject in Accounting Research Bulletin No. 17 (December, 1942) and the Securities and Exchange Commission in Accounting Release No. 38, dated December 19, 1942. Both publications seem to present the same general conclusions. Briefly, they convey the idea that (ignoring tentatively debt retirement credit) the statements should reflect the result of the following entry:

1. Excess Profits Tax.	000	
2. Postwar Refund Receivable (or U. S. Bonds). . . .	000	
3. Excess Profits Tax Payable.		000

Item 1 of the entry should be shown in the profit and loss statement as an expense before deriving net profit for the year, but with sufficient analysis to reveal the gross amount of the tax and the net credit (deduction therefrom) for postwar refund. Item 2 should be shown as an asset, preferably under "other assets" at the bottom of the balance sheet. The bonds received in due course in such a transaction "bear no interest, and only after, and not before, cessation of hostilities in the present war may the bonds be transferred by sale, exchange, assignment, pledge, hypothecation, or otherwise."[3] Item 3, naturally is shown as a current liability, being the full amount of the excess-profits-tax calculation for the year.

Disclosure in the income statement as recommended in the Institute's bulletin would assume the following, or some other reasonably revealing form, when both the postwar credit and debt-retirement credit are present:

Income before excess profits taxes			$000
Deduct excess profits taxes, gross		$000	
Less postwar credit	$000	000	
Less debt-retirement credit	$000		
Net excess profits expense applicable to the year			$000
Net income after excess profits taxes			$000

When there is a debt-retirement credit, the amount of such credit is deductible from the gross amount of the excess-profits-tax liability in the current liability section of the balance sheet. For analytical purposes the statements might be considered as reflecting a series of entries like these:

1. Excess profits taxes (gross)	000	
Excess profits taxes payable.		000
2. Postwar credit (refund) receivable (or U. S. Bonds). .	000	
Excess profits taxes		000
3. Excess profits taxes payable.	000	
Debt-retirement credit .		000

Some difference of opinion exists concerning the disclosure of the postwar credit in the income statement rather than in the balance sheet as a deferred credit. In the latter case, Entry 3 above would show a credit to "Deferred postwar credit," or some similarly named account.

INCOME TAXES—LOCATION AND DISCLOSURE

As taxes on corporate profits become larger and constitute a greater proportion of the total deductions from income in deriving the amount of net profits available for stockholders or for meeting unusual or extraordinary losses, it seems more essential that they should be disclosed as an expense or "cost of doing business." In order to avoid misinterpretation of profit and loss results, income taxes should be so disclosed and so located in the annual income statements as to enable the reader readily to perceive not only the amount of such taxes, but also the amount of net income left after meeting all tax obligations. The following points relative to income taxes and their location and disclosure in financial statements are currently of some importance:

(a) Income tax as an item in the income statement before deriving the final net income figure.

[3] SEC Accounting Release No. 38.

(b) Separating income tax items:
1. Tax on income from recurring items
2. Tax on income from sale of capital assets and other unusual income items

(c) Analyzing income tax results into:
1. Tax applicable to income on recurring items
2. Tax deduction resulting from loss on sale of capital assets, loss on foreign investments, or other losses of an unusual character.

(d) Disclosure of income tax liability of individual partners in the balance sheet of a partnership.

It is believed that those who have given special attention to this subject would recommend the following practices and procedures for items (a), (b), (c), and (d) as stated above.

(a) Income taxes on the regularly recurring operating results of the year should be shown in the income statement before deriving an amount to be designated as net income for the year, or some similar title, for transfer to surplus.

(b) Only the income tax applicable to the net income of the year derived from recurring items should be shown as a direct deduction from "net income before income taxes." Income taxes on profits of a substantial amount derived from unusual and nonrecurring sources should be deducted from such unusual profits on the face of the surplus-analysis schedule, or the income statement, whichever is used in a given case for revealing unusual profits and losses.

(c) If a substantial loss is incurred in the sale of a capital asset, or from foreign investments or other unusual source, the income-tax deduction arising from such loss should be shown as a separate item in the income statement or surplus analysis, preferably as a deduction from such unusual loss. This would then permit the howing of income tax applicable to the regular income from recurring items as a deduction at the gross amount in deriving "net operating income after income taxes" or corresponding result similarly designated.

(d) For the benefit of bankers and other credit grantors, public accountants should disclose by some appropriate method (footnote or otherwise) in partnership balance sheets a liability to the government for the amount of the income taxes payable by the several partners, as a result of their respective profits derived from the partnership, as reflected in the income tax return of the partnership for the year. This recommendation grows out of the experience of bankers and others who have observed that usually such income taxes are paid from partnership funds. If no disclosure of such liability is made, the credit grantor is misinformed as to the current financial position of the partnership.

It seems that each decade brings a quota of unusual problems for the accountant. Most of the problems seem to require the exercise of judgment in their solution rather than the application of some mathematical formula or some natural laws of science. For this reason, except when applied in a case that is subject to rules of some governmental agency, the accounting treatment of many items is recommended as optional. It is generally expected that the test of time will reveal whether a given suggestion issued for the guidance of the profession will become an axiom or an antique.

PERSONNEL PROBLEMS

Although in general these remarks have dealt with technical subjects, we could hardly assume that a current discussion of wartime accounting problems would be complete without a few comments regarding personnel.

In the earlier stages of the defense program, accountants were listed as being engaged in so-called critical occupations. Draft boards were advised to give due consideration to those who were qualified to serve in the several fields designated as critical. Later Selective Service officials found it necessary to omit accountants from the list because it had been so difficult for draft board officials to differentiate between two individuals, both of whom called themselves accountants but one of whom might be occupying a very responsible position involving a considerable amount of technical accounting training, while the other might be a bookkeeper without much knowledge of the general principles and practices of accountancy.

It was understood at the time accountants were dropped from the critical list that in general a certified public accountant would be recognized as the type of individual who should be reserved in the general war planning for those types of positions for which he was best qualified. There are and have been many more positions than could be filled by the certified public accountants available.

The demand for accountants in war industries, governmental bureaus, and professional accounting firms has been so great that those who are frequently asked to assist in finding a supply of accountants have almost decided that the demand is unlimited and that there is no supply. Many business concerns engaged in war industries cannot obtain sufficient trained accountants to handle the assignments of the accounting department. Professional accounting firms have tried numerous devices for maintaining staffs which will be able to take care of the annual audits and income tax engagements. A more widespread adoption of the natural business year has assisted to some extent. Sixty-day extensions granted for the filing of income tax returns have also helped. Older members of the staff have been called on to work for longer hours than ordinary health measures would seem to justify. Women have been added to the staffs of public accountants in larger measure than ever before, but most firms seem to be unable to find enough qualified women to meet their requirements.

One firm, we understand, is offering special scholarships to women students in a university if they will register in an accelerated accountancy curriculum and prepare themselves for public accounting work with that firm within a year. University professors of accounting are generally urging women students who are mathematically inclined to major in accountancy with a view to alleviating the shortage.

In spite of handicaps, public accountants seem to agree that the standard of auditing procedure should not be lowered. If necessary, accountants will merely refuse to accept engagements beyond the limit of their staff to effect a satisfactory audit in accordance with the standards suggested in the pamphlet of the American Institute of Accountants on *Extensions of Auditing Procedure* and the underlying bulletin *Examination of Financial Statements*.

THE AUTHORITY OF HISTORY IN INVENTORY VALUATION

LAWRENCE L. VANCE

A WRITER who contends that the only proper principle of inventory valuation for general purposes is cost attempted, some months ago, to show that certain notable instances from the early periods of accounting development, which lend support to a cost-or-market rule, were explainable as the result of "expediency and convenience" and represented no true judgment upon accounting principles.[1] Since the article referred to seeks to support the proposition that the establishment of the cost-or-market method is the result of rather erratic and localized forces, and since this proposition is contrary to our knowledge of the way most institutions have grown which can be observed over long periods of time and over wide areas of the globe, the subject requires further examination. In the following paragraphs notice is taken of some of the references to valuations, other than cost, which the history of accounting up to the middle of the nineteenth century affords us (the list is not submitted as exhaustive), and then consideration is given to the question of whether the particular valuation basis at issue (cost-or-market) is the illegitimate offspring of unacceptable parents or the due (though imperfect) issue of commercial need.

For the sake of easy review of the chronology, the dates appropriate to each of the items are listed at the head of the paragraph in which the material is described.

1404–1406. The first records showing the use of cost-or-market are dated from this early period. They are found in the accounts of Francesco di Marco of Prato, who was the head of extensive trading, banking, and cloth-making enterprises in the last half of the fourteenth century and the first decade of the fifteenth. Penndorf states in general terms that the method of inventory valuation in these accounts was cost except when market was lower, in which case market was used.[2] He gives two specific examples, one of which traces a lot of goods from an inventory of December 31, 1404, to the "next" inventory where it is written down and the difference carried to the account "loss of goods." The other notes that goods bought during the course of the fiscal year (Geschäftsjahr) 1406 were valued in the inventory at the end of that fiscal year at less than cost, with the explanation "we have put fl. 10. 16. 7 into the debit of the account 'profit on goods' on f. 264 as loss because we no longer value them as above since their price has gone down." The implication is clear that these examples are not isolated cases in the books in question.

The contention has been made that the policy of write-downs disclosed above was an effort at tax avoidance, made in a time when ad valorem levies upon personal as well as real property were heavy, and hence has no general significance for accounting principles. This supposition is open to many objections, the first of which is that it takes into consideration too little of the material available. Professor Littleton apparently relies on articles by Penndorf[3] in which some early fifteenth and

[1] A. C. Littleton, "A Genealogy for Cost or Market," THE ACCOUNTING REVIEW, XVI (June, 1941), pp. 161–167.

[2] Balduin Penndorf, *Luca Pacioli*, Abhandlung über die Buchhaltung 1494, . . . mit einer Einleitung über die italienische Buchhaltung im 14 und 15. Jahrhundert und Paciolis Leben und Werk (Stuttgart, 1933), pp. 36–37.

[3] "The Relation of Taxation to the History of the Balance Sheet," THE ACCOUNTING REVIEW, V (September, 1930), pp. 243–251, and "Inventur, Bilanz und

sixteenth century tax conditions and returns were described. Immediately following a discussion of some accounts of the Medici from the year 1440 to 1460, Penndorf notes that taxes at that time were very heavy, several levies of ½% on property and several compulsory loans of 1% sometimes being made in one year, and further on that evasion had become so serious by 1458, being accomplished even by the keeping of two sets of books, that the system of returns by the taxpayer had to be replaced with an "apportionment" method. This is noted in the article which seeks to explain di Marco's accounts in terms of tax avoidance.

Penndorf also notes, however, that "according to the law of 1427, landed property, live stock, money, and business capital had to be assessed," and further on "As it is now with us, the property tax balance was not a true balance sheet, but a statement of property which had its foundation in the books and ledgers of the firm." Obviously we cannot apply the law of 1427 to di Marco's 1406 accounts, and although we concede that conditions were similar in 1406, the fact that the tax return then, as now, was entirely separate from the books of account leads us to conclude that there was no more necessity for identical valuation bases between them then than now. Hence, one who recorded inventories at the lower of cost or market in the accounts, referring to the "account for loss on goods," had no reason except a determination of profit and loss. In fact complete identity of valuation bases between the tax return and the books was not expected since, as Penndorf notes, real property was valued in the tax return at a capitalization at 7% "of the produce of the soil." Furthermore, there would be no point in demanding a complete identity if the authorities reserved the right to revise the assessment submitted by the taxpayer. Again quoting Penndorf: "The officials wrote their remarks on the margin of the tax return and frequently increased the amounts."

The supposition that early evidence of the use of cost-or-market grew out of tax considerations is subject to other and more general objections. It might be expected that a method designed for tax purposes would include some reference to its purpose. But instead the explanation given is the kind which would appear if there was an accounting policy in effect that sought to recognize economic losses which were soon to be realized through sales—the statement that "their price has gone down." Furthermore, general conditions of what might somewhat inappropriately be called "public finance" in the fourteenth and fifteenth centuries were such as to make such a mild device as cost-or-market for the closing inventory insignificant as a tax-avoidance scheme. That period was replete with wars, abuses from a decaying feudalism, and much grasping clerical domination. Much revenue was raised by tolls and customs of every sort; tax farming was common (Italian financiers were active agents under this system); much of what amounted to taxation still depended upon feudal relationships, the exactions of which were often extremely heavy; and a favorite financing device which served as taxation was the forced loan, which was often disposed of by repudiation. With this background in mind, it is not hard to understand why men would keep two sets of books, or no books at all; why they kept their capital accounts personally, secret even from their employees; and why they would take pains to conceal physical wealth. There seems so little in common between these vigorous methods of tax evasion and the rule of cost-or-market

Bewertung in der italienischen Buchhaltung des 14. Jahrhunderts," *Zeitschrift für handelswissenschaftliche Forschung*, 24 (September, 1930), pp. 489–495.

that one may well be disinclined to classify them together.

A method of so little significance in tax policy and of such apparent appropriateness to an accounting policy which seeks to make the accounts more responsive to economic forces can not be explained away as a tax-avoidance scheme. In the case of Francisco this seems reasonable, since we note from Penndorf that he "was not an honest taxpayer" in that he represented himself as without means in response to an assessment in Avignon in 1375 when his balance sheet showed the contrary. Evidently this resourceful Italian had devices better designed for tax evasion than cost-or-market.

1494. In this year Paciolo[4] published the first work on accounting to appear in print in his *Summa de Arithmetica, Geometria, Proportione et Proportionalità*. Paciolo's references to valuation, which generally specify current prices,[5] are interpreted by opponents of cost-or-market as applicable only to an opening entry which Paciolo was describing. In view of the fact that the volume of trade was not so great than as now and the further fact that there was less diversity of merchandise, one might argue that a merchant could be called upon to remember cost prices for purposes of an opening entry; and that specifying "current prices" for ginger and other items as Paciolo did (Chapters 12 and 16), indicated a preference for them. The author who is discussed in the next paragraph below, for example, supports this suggestion by indicating that he is using cost for certain items in an opening entry. In listing jewels he uses the phrases "que me coustent" (once), "que coustent" (twice), and "que couste" (once). Similar instances can be cited from Peele (1553) and Oldcastle (Mellis ed., 1588). Furthermore, it is at least apparent that Paciolo was not an adherent to cost valuation as applied to determine the figure at which receipts of bartered goods are entered. In Chapter 26 he states that the value of goods received in exchange shall be estimated and this amount used to debit the account with such goods and to credit the account which contained the goods given up.

1543. Jan Ympyn's *New Instruction* was published in Dutch and in French in this year. While it is for the most part a translation of Paciolo, it is most notable for Ympyn's own contributions: his thoroughgoing illustrative material and the fact that the book was an important vehicle for spreading a knowledge of the "Italian method" throughout Europe and in England. Ympyn specifically requires cost as the basis of inventory valuation, but he includes in his illustrative set an interesting transaction the accounting for which takes definite leave from the "cost principle." The transaction was an exchange of 44 pieces of English cloth for 110 pieces of Dutch cloth, the trade being considered an equal exchange according to Ympyn's statement in the journal entry recording it. To record the transaction he debited the other trader and credited a clearing account called "Goods in Exchange" for an amount which appears to be arbitrarily large (£320–16–8), then credited the trader and debited the clearing ac-

[4] The name is variously spelled. Penndorf, *ibid.*, uses "Pacioli."

[5] One exception is Paciolo's advice to "make the prices rather higher than lower; for instance, if it seems to you that they are worth 20 you put down 24, so that you can make a larger profit" (Geijsbeek translation, Ch. 12). Internal evidence suggests an interesting explanation for this: in Ch. 7 Paciolo says "Many keep their books in duplicate. They show one to the buyer and one to the seller, and this is very bad, because in this way they commit perjury." If we can attribute a considerable amount of moral inconsistency to Paciolo or follow the evidence of diversity of style in the book and conclude that there were two authors with different attitudes, we may interpret this valuation procedure as a means of furnishing the seller with evidence better calculated to convince the buyer of the value of the goods than the cost price would. One can easily imagine a seller, in those days of authoritarian price fixing in general and the *justum pretium* of the Church in particular, saying to the customer: "Look, here is my ledger and here is the entry for these goods. The price I'm offering you leaves me hardly any profit at all."

count with the same figure when the goods promised were received. The significant entry was made when Ympyn recorded his delivery of English cloth; here he credited the account for English cloth and debited "Goods in Exchange," explaining in the journal his computation of the amount as follows: "selling them ordinarily with a profit of ten per cent or thereabouts would amount to £229–18–0, which sum I have credited here." This figure is exactly 10% over cost on 44 pieces from the last lot of cloth charged to the English Cloth account. To conclude the record, Goods in Exchange was credited and Dutch Cloth debited for the £229–18–0. The only explanation for the use of the much higher figure in the memorandum entry to record the other trader's obligation to deliver seems to be that it would make a better case for the claimant in event of default by the party charged.

Evidently Ympyn had no scruples about cates no allegiance to a "cost principle" as it has been enunciated in recent years, and suggests that cost may have been specified for the inventory without reflection upon the economic aspects of the method.

1550–1581. Valentin Mennher, a German who lived in Kempten, wrote books on arithmetic and bookkeeping which were published over this period. In his *Practiqve povr brievement apprendre à ciffrer, & tenir liure de comptes, auec la regle de coss, & geometrie* in the "Seconde partie . . . laquelle demonstre pour briefuement tenir liure de compte á deux liures, nouuellement composé" there is a clear use of current value for an inventory. On folio 5 of the ledger, illustrated in the 1564 edition, there is an account for French wine which may be transcribed, with the addition of the unit prices (expressed only in the journal entries in the original) and with rulings in modern form, as follows:

Laus Deo. Anno. 1564

French Wine

Debit	J.F.		Credit	J.F.	
15.Feb.64. from Ia. Lam 10 tuns at £ 6	3	60.-.-	12.Feb.64. sold to I.P. 10 tuns at £ 7	4	£ 70.-.-
3.Mr. bought of Lenart Gall 10 tuns at £ 5	4	50.-.-	12.Mr. sent to London 10 tuns at £ 5	5	50.-.-
15.Mr. bought of Iorge Boll 20 tuns at £ 6	6	120.-.-	15.June. to I.L. 3 tuns at £ 6	8	18.-.-
first of April. from Ian Pierre 5 tuns at £ 5	7	25.-.-	14.Sept. for the new books, 30 tuns at £ 5	10	150.-.-
28.April. bought of Iacques Lam 8 tuns at £ 6	8	48.-.-	9-14 for loss		15.-.-
Total, 53 tuns.			Total, 53 tuns.		
		£ 303.-.-			£ 303.-.-

taking up a profit realized in goods as against realization in cash or accounts receivable. While the element of an exchange transaction distinguishes this entry from his precept on cost valuation of inventory, the procedure used clearly indi-

The date of the first debit entry was entered in error as Feb. 15; the journal gives Feb. 12.

In the explanation for the entry to set up the inventory on the "new books" entered on September 14, 1564, there is

included the following: "There remains to me for the new books 30 tuns of French wine which are worth at this time £5 per tun, which makes £150.–.–." It is noteworthy that when consigning goods to London (in the illustration) Mennher used cost, but when closing the accounts he used current value; this, with the diversity of purchase prices in the inventory, indicates a conscious and technically accurate use of a valuation procedure for closing purposes. That Mennher was consistent in using current value is shown in the brief *Livre de comptes a la mode d' Italie* contained in the *L'Arithmetiqve de Valentin Mennher, pour briefuement chiffrer, & tenir liures de compte* published at Lyon in 1558 by Gabriel Cotier. The last journal entry in this brief illustration (which consists of a journal, a book of "debts," and a book of merchandise accounts which is made to carry an inventory balance into a new ledger) values goods bought at £43 at the higher price of £44. Mennher gives a journal entry in the 1550 edition of his work in which a merchandise account is credited £14 on account of "dryness and dust," indicating a recognition of deterioration and obsolescence as a distinct problem. This lends more weight to the already clear fact that Mennher deliberately adopted a current market valuation for inventory, since he gave separate, explicit consideration to the distinct aspects of the problem.

1586. Pietra, a Benedictine monk, published at Mantua the *Indrizzo degli economi* dealing with bookkeeping for a monastery. He prescribes that goods be valued at a standard price, which price must be lower than the market price so that one may never have to sell at a "loss."[6]

1592. This year saw the publication of "Buchhalten mit zwey Büchern—" by the Danzig teacher Wolfgang Schneider, who signed his book Wolffgangum Sartorium, and whose work, due to the mediaeval preference for Latin, is known as that of "Sartorius." This curious work was done in rhymed couplets to facilitate the absorption of bookkeeping rules by the student. His instruction on inventory was that one should have the unsold goods "estimated," thus presumably suggesting market valuation.

1594. In this year there appeared in Hamburg, Passchier Goessens' *Buchhalten fein kurtz zusammen gefasst vnd begriffen nach arthvnd weise der Italianer—*. Goessens, according to Penndorf, was influenced by Dutch writers. His illustrative material includes no account with an inventory of unsold goods, but in his instructions he specifies that the value of goods unsold be estimated and the closing entry made accordingly. This evidently is to be interpreted as a market valuation, which interpretation is made by Penndorf[7] of this and of Sartorius' method as well.

1676. Savary, the author of the French Code of 1673, wrote a book called "The Perfect Merchant" (*Le Parfait Negociant*). In it he clearly expresses the cost-or-market rule for inventory valuation and expounds upon it at some length. He is credited with being the individual most responsible for the eventual wide establishment of the cost-or-market rule. Professor Littleton has sought to identify Savary's valuation method with the code of law he wrote and which bears his name. The argument runs as follows: Since the Code required a biennial inventory and the keeping of accounts by all merchants and bankers, and since it was directed at the

[6] See Hugo Renz, "'Die Anleitung der Verwalter' v. Pietra Don Angelo, Genua, und der 'Tractat über die Weise das doppelte Hausbuch zu halten' von Lodovico Flori," *Zeitschrift für Buchhaltung*, V (July, 1896), p. 147.

[7] *Geschichte der Buchhaltung in Deutschland* (Leipzig, 1913), pp. 149 ff. and 186. See also Ernst Ludwig Jaeger, *Beiträge zur Geschichte der Doppelbuchhaltung* (Stuttgart, 1874), p. 257.

suppression of commercial frauds and to the needs of bankruptcy administration, and since it was written by Savary, and since Savary's manual was written at the request of the commissioners who served with him on the commission for the improvement of commerce which produced the Code, the cost-or-market rule was in this case the result of an effort to avoid fraudulent overvaluations.

This argument is defeated by one simple fact. If the lawmakers had considered the cost-or-market principle important in combating fraud, they could have prescribed it. They did not. They specified no valuation policy whatever. The evident conclusion is that the lawmakers were not so much interested in valuation as in seeing that records existed from which transactions could be proved. Savary, in *Le Parfait Negociant*, says of the merchant who uses the cost-or-market rule " . . . he has probably made a true statement of his property . . . ." In discussing the method, he points out that recognition of a decline in market value of goods will place the merchant in a position to bargain for their sale without being confused by the necessity of justifying to himself a sale at a loss on cost price; he specifies annual inventories, in contradistinction to the Code's two-year provision; and he also points out that revaluation of the goods on the books does not preclude a sale at a favorable price later if circumstances permit it. These remarks tend to show that Savary was dealing in his manual with what he considered principles of good management, and that the manual was intended to be an "improvement of commerce" over and above the requirements of the Code; as such, his valuation method must be looked upon as stating a conclusion about accounting principles. Furthermore, the commissioners could not have considered an inventory taken once in two years a satisfactory basis for determining values for bankruptcy administration, since there would be no assurance in any specific case that it would be sufficiently current. As a means of periodically verifying the accounting record it was adequate.

1772. H. Magelsen, a German, wrote a book entitled "Die ersten Gründe des Buchhaltens samt anwendung derselben . . .," which was published in Altoma, near Hamburg, in this year. An average market price is suggested for inventory; in his illustration he uses cost price. It may be noted in passing that his discussion of the inventorying of furniture and other chattels–which involves depreciation concepts) also indicates a recourse to valuation as against "cost-pricing" procedure.[8]

1767, 1787. In each of these years there appeared editions of a business manual under the name M. De la Porte, called *La Science des Negocians et Teneurs des Livres*, in which the instruction on inventory valuation reads " . . . it is necessary to value the rest, it may be according to the purchase, or upon the basis of what this merchandise is then worth." Further on, in discussing the closing process, the author says "one values the rest" and gives an example in which only one lot of goods at a single price appears on the debit side and in which the balance is computed "on the basis of the purchase." In describing the general inventory required by the laws of that time he gives the instruction to "evaluate them according to their proper value." In the model of such an inventory which follows this last instruction, several kinds of goods are listed, the units in a number of lots under each type being listed and then added to be extended at a single price. This is a valuation procedure, as opposed to a "cost-pricing." In the author's model of a general ledger, cost is used as the inven-

[8] Penndorf, *Geschichte*, p. 241, and Max Lion, *Geschichtliche Betrachtungen Zur Bilanztheorie bis sum Allgemeinen deutschen Handelsgesetzbuch* (Berlin, 1928).

tory value, but the several merchandise accounts show no example of purchases of the same article at several prices to be accounted for as inventory, so the issue whether "identified cost-price" was intended by his use of cost cannot be settled. Earlier works under the name of this author appeared in 1685, 1699, and 1755 called *La Guide des Negocians et Teneurs de Livres* in which the instruction for inventory valuation requires one to take that proportion of the debit value in the merchandise account which the quantity of goods remaining bears to the total quantity bought, and so gives us an early statement of an average-cost method.

The books were published in Amsterdam and in Paris. There were two authors of the name De la Porte, father and son. While the circumstances which made possible the long career of this work—102 years—are not clear, Jaeger in his *Beiträge zur Geschichte der Doppelbuchhaltung* attributes the 1775 edition at least to the son.

1794–1873. The state of Prussia enacted the "Allgemeines Landrecht für die preuszischen Staaten" in 1794, which required that balance sheets be prepared using the lower of cost-or-market as a basis. When a conference met in 1857 to draft a uniform commercial code for the German states the Prussian delegation presented a draft specifying cost-or-market for goods. It was objected to as being too specific, and the statute as written required properties to be shown at the "value which ought to be ascribed" to them. A new corporation law, enacted after the panic of 1873, required cost-or-market for securities and merchandise having an exchange value, because investigation had shown that promoters had interpreted the old provision as allowing the use of an estimated sale price (which reflected much optimism), with the result of showing surpluses which were believed by investors to represent earnings.[9] Professor Littleton cites this law as another instance of tampering with accounting principles for ulterior purposes. But here the concern was with the interpretation of statements by investors, and if this is not an appropriate determinant for accounting principles there is none. Some writers virtually disown the balance sheet in order to be consistent in advocating cost valuations, but it is none the less true that investors may be misled by surpluses which are allowed to exist in spite of evidence that normal turnover of current assets will soon result in their reduction. Furthermore, Weiner indicates that the German government was reacting in 1873 to valuations at estimated sales value, and it might therefore have selected cost instead of cost-or-market as the prescribed basis. The reform was intended particularly to make the prescribed valuation base more specific, and the government evidently selected the specific base it considered a proper accounting of surplus to investors. The judgment it expressed in adopting cost-or-market must be looked upon as an accounting judgment and, in view of the community of interest of managers and investors, the conclusion is of general significance.

1796. M.R.B. Gerhardt's *Der Buchhalter* was published in Berlin in this year, and is important, according to Penndorf, as the classical work on bookkeeping of the eighteenth century. In it the author specifies cost valuation for assets generally but says that where there has been a noticeable change in the value of similar articles one should adjust to such value, and makes the significant statement that this is proper where the items inventories are soon to be realized.[10]

[9] For a more complete discussion see Joseph L. Weiner, "Balance-sheet Valuation in German Law," *The Journal of Accountancy*, XLVIII (September, 1929), pp. 195-206.

[10] Penndorf, *Geschichte*, p. 241.

1804–1820. Johann Michael Leuchs wrote *System des Handels* (published in 1804), and *Theorie und Praxis des doppelten, des einfachen und des nürnberger Buchhaltens* (published in 1820). In his instructions for the inventory taking and entry at the end of a period he says, "We now weight the goods on hand and evaluate them at cost price, or if this should have decreased too notably, at the price we could buy them at now; for we should not deceive ourselves as possessing more than we can assume under the circumstances, and thus we should not evaluate the goods at a higher price than we can get for them." Apparently Leuchs' reference to what "we can get for them" is based on the usual presumption that cost and selling price are interrelated, since he specifies replacement cost for the actual computation of the inventory. He also suggests devaluations for deterioration of the goods.

This ends the list of instances. While, as stated above, exhaustive search has not been attempted, obviously the citations can not be explained away as reflecting wholly fortuitous events that have no common significance. It is to be noted, however, that of all the authors who wrote during the period here covered, but especially in the earlier part, those who specified cost valuation were considerably more numerous than the ones mentioned above as supporting another base. What little we know of actual practice indicates that cost was the usual basis. It is also to be observed that very early writers gave virtually no attention to theory, and such rules of valuation as can be found in their works are obtained by imputation; as we have noted, instances occur in which an author suggests a variant from cost valuation in his discussion and does not follow it up in his illustration. With these facts in mind, we are prepared to question the significance that the history of the cost-or-market rule may have for modern accounting theory, even though the cost-or-market rule gained ground during the last half of the nineteenth century and is still with us.

The first step in our interpretation of the facts is to note that we should not expect cost-or-market to appear on any extensive scale in early accounting literature and practice. In the very early stages transactions were not numerous by our standards, and were looked upon as individual deals rather than as parts of a continuous stream of operations. Parcels of goods were individual in character and were individually described in the accounts. A venture was one of the commonest modes of doing business: the purchase of an interest in a ship leaving for the East and the dispatching of an agent with goods to some outlying fair are transactions frequently met is the old records. Separate accounts were opened for the ventures; the profit or loss was computed and the account closed when the transaction was complete. In such circumstances the inventory problem as we know it did not exist. Inventories were likely to be relatively small. The closing of accounts was irregular; it was more apt to be done upon the liquidation of a partnership or when the ledger was filled than otherwise. Further, price-fixing was widespread and the doctrine of a "just price" was widely advocated (Paciolo says that all a merchant wants is a "reasonable profit"), hence price fluctuations may have been less then than later.

Under circumstances in which the venture point of view was appropriate, one cannot expect to see problems that are characteristics of the use of a fixed fiscal period, of the accumulation of large stocks, or of a mass-production type of manufacturing and selling operations. The cost-or-market rule is an effort to give effect in the profit computation of one period to the forces operating in that

period which will not be reflected in the sales or cash accounts until a subsequent period, and this for the most part was no concern of the fathers of bookkeeping. It is obvious, however, that such problems must have presented themselves to the early merchants upon occasion. Now and then some organization, such as that of Francesco di Marco, would grow so large that its transactions would look like a continuous stream and its stocks would become relatively large. It is natural, furthermore, to attempt to assess one's financial progress in terms of periods of time. When faced with such situations or when in such a mood, the inventory problem as we know it undoubtedly suggested itself to our predecessors. We have such evidence as has been listed above that in some cases at least they reacted with a cost-or-market valuation. This also explains the occasional reference in a text to some other valuation than cost although the latter method is used as an illustration—the need for an alternative was not yet strongly felt though observed.

The clue to the significance of the history of this aspect of accounting theory lies in the fact that recourse to a cost-or-market rule becomes more frequent as the volume of trade grows and in the fact that it becomes common only after the Industrial Revolution has ushered in the modern era of production. What could appear necessary to businessmen of the late Middle Ages only rarely, and to the commercial world under mercantilism hardly more frequently, presents itself insistently under modern circumstances. Then there is need to take into account, as has been suggested above, the forces which have already cast the fate in one period of goods which will be sold in the next. While it must be made clear that the present effort is not an attempt to defend cost-or-market as such as a valuation principle,[11] it is of prime importance that the method be recognized as having grown, as did accounting itself, in response to the needs of businessmen. Such a view is in accord with the usual pattern of the historical development of human institutions, and, in addition to the specific refutations set down above, leads to the rejection of the contention that a cost-or-market rule is a result of "expediency and convenience," if those terms are given a deprecating connotation, and to the final conclusion that the direction of accounting development has been dictated by the refinement of method to serve better the need which has been described. Since this is clearly a logical direction, future developments may be expected to follow the same kind of pattern.

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[11] The writer considers cost-or-market a very crude and inexact means of achieving the objective which his interpretation of the motivation behind it visualizes. For the complete statement of his position see "Earning Power Valuation of Inventory," THE ACCOUNTING REVIEW, XVII: 376 (October, 1942).

INTERNAL AUDITING*

HENRY B. FERNALD

THE SUBJECT of internal auditing is receiving increasing attention because of the recognition now given by accounting authorities and governmental regulations to its importance in determining the scope of audit necessary as a basis for an independent accountant's certificate. The rules of the Securities and Exchange Commission include the following statement [Rule 2–02 (b)]:

"In determining the scope of the audit necessary, appropriate consideration shall be given to the adequacy of the system of internal check and control. Due weight may be given to an internal system of audit regularly maintained by means of auditors employed on the registrant's own staff."

The rule thus officially stated is merely the formal expression of what has long been the generally recognized practice of independent accountants. Without trying to discuss in detail its exact phraseology or the exact definitions which may be applicable to it, we may note that it refers (1) to "the system of internal check and control," and (2) to "an internal system of audit regularly maintained by means of auditors employed on the registrant's own staff."

If the regulations referred only to "internal check and control," we should certainly consider that phrase to include internal auditing, because internal auditing is, after all, merely a part of internal check and control of the accounts. Even as the regulation is worded, it does not set up internal auditing as something separate and distinct. It recognizes the special weight to be given "an internal system of audit regularly maintained by means of auditors employed on the registrants own staff." This clearly is distinguished from such internal auditing as might be done in a rather unsystematic or irregular way by those who could not be considered as really "auditors" employed on the registrant's staff. I shall later emphasize this distinction. The regulation does not say that no consideration is to be given to internal auditing which is not so systematic and regular. It cannot receive the special weight referred to in the second sentence quoted, but it may still receive some consideration as a part of the internal check and control.

Then we note that the reference here made is to "the system of internal check and control." Grant that we cannot place the same reliance on accounts subject to sporadic and irregular check and control that we can on accounts in which an adequate system of internal check and control is maintained, nevertheless we can recognize such checks and controls as in any case may exist. We must not attach undue weight to the fact that bearer bonds are kept in a safe deposit box which can be opened only in the presence of two officers of the company; yet we should recognize that this gives a measure of check and control which would not exist if one person alone had access to the box or if the bonds were kept in a drawer to which anyone would have free access. We should not place undue reliance on the fact that all checks must carry two signatures; but we should recognize that this does give a control which is absent if the cashier alone can draw a check to his own order. All such features are among those to which an auditor would give consideration in determining the scope of his examination. The regulation does not intend to change this but it does emphasize the importance which attaches to system and regularity and adequacy.

* Address before the Accounting Society of the College of the City of New York.

It is important to understand and apply generally accepted or officially imposed auditing standards; the recognized forms for presenting accounting statements; the meaning and implication of the words we use in such presentation. But in a brief paper I can only deal with some of the practical problems of factual determination and of the relation of internal auditing thereto. Known facts may be wrongly presented, but we can hardly hope for proper presentation without appropriate factual information.

The expression "internal auditing" may be—and probably is generally—rather broadly used, in place of "internal check and control," to indicate all that is done within any organization to determine and safeguard the accuracy of its accounts as distinguished from what may be done by an independent auditor who is brought in from outside the organization. Without further question of whether this is a technically correct definition, let us adopt it for the purpose of this discussion.

So considered, we shall find that internal auditing covers a considerable range of check and control of the accounts or accounting figures. Even if we limit the expression "auditing" to a verification or check by someone other than the person who had made the original entries, we still find a wide field of work to be included. In large well-organized businesses we may find a special staff of internal auditors who do nothing but audit accounts. They have no responsibility for any original accounting duties, but merely check, verify, and report upon the correctness of work of others. Such a force, well performing its duties, undoubtedly contributes to the accuracy of the accounts. This, however, is not the only kind of work which in the broad scope of the term may be considered as internal auditing. We may illustrate this by the following examples:

(1) Consider first the strictly one-man business. Assume one man who is proprietor, bookkeeper, cashier, salesman, billing and shipping clerk, and does everything else that is to be done in the business. Clearly, we have here no internal auditing. A proprietor may check his figures one against the other. He may check the total of his shipments against the total of his bills; he may carry controlling accounts in his ledger; but we hardly consider one man's checking or control of his own figures as representing auditing.

However, suppose that the proprietor, while he keeps some memorandum figures about his business and keeps a check book which shows the deposits he makes in the banks and the checks he draws, does not attempt to keep any real books for his business but arranges for someone who will give perhaps a few hours a week or month to assembling the data and writing up a set of books for him. Even though such a person is a practicing certified public accountant, we have the cardinal thought that a person does not audit his own work. He may check and verify it, but we do not consider that a man audits what he himself does. The person who is engaged actually to write up the books must be considered rather as a part-time employe than an independent auditor. He may do a considerable amount of internal auditing as he may check and verify the basic entries which have been made by another, but we can hardly say he is making an independent audit.

(2) Next consider that this business has grown so that the proprietor employs a man (or a girl) as cashier and bookkeeper. Assume that the proprietor himself then sensibly proceeds to check over some features of the accounts of his cashier and bookkeeper. I know no reason why we may not broadly refer to this as internal auditing. How far it may go and how systematically it may be done and what record there may be of it which could be used by any inde-

pendent auditor, would probably be a considerable question. Yet if the proprietor kept his own record of the orders he received and checked this against the orders shipped and the final collections, and compared his bookkeeper's cash records therewith, perhaps we could say that to this extent there was some internal auditing. In any event, it would be a valuable check upon the cashier and bookkeeper.

(3) Carry this further and consider that the business has grown until it reaches the point where it has a chief clerk or office manager, a bookkeeper, a cashier, and a receiving and shipping clerk, as well as the proprietor in active charge of the business.

Presumably the business has not yet reached a point where it can afford to employ a special internal auditor who will do nothing but check and verify the work of others. We do not minimize the work which can be done by an internal auditor if we look at any situation to see what might be one without him. With four employees, there is clearly much that can be done in division of work in cross-check and control, and even in having one person examine and verify details of the work of another. There are things that can be done, and ought to be done, because with a number of people handling the cash, goods, and accounts of the business there is a danger of misappropriation which did not exist when the proprietor himself was handling everything. Perhaps there is now no greater danger from carelessness than there was when the proprietor was trying to do everything himself, although if the proprietor was careless he himself suffered the loss, while this same standard does not exist for the employees. Moreover, the very increase in volume of business which has occasioned the increase in number of employees has made greater the danger that in a multitude of transactions some features may be overlooked or that errors may have a greater weight than when business was small and transactions few. So there is both opportunity and need for better cross-check and control than in the one-man business.

The practical question is how the best check and control can be obtained without costing more than the work is worth. Manifestly, if the cost of doing business, however that cost is occasioned, exceeds the results of the business, there is no object in trying to carry on the business at all. We may recognize that we cannot measure this solely by day-to-day, month-to-month, or year-by-year results, because an excess cost today may be justified as a cost for building up or maintaining business for the future. The loss from one day or month or year may be really an outlay for expected future profits. We may not know with certainty whether an excess cost of today is wise investment for the future, but unless there can be that expectation, there is no object in continuing a business in which costs and expenses exceed income. This is true whether we consider the purchase of goods or materials, the wages of productive labor, the cost of administration and overhead, or any other costs and expenses of the business. So we recognize that if for the protection of the business it were necessary to install a system of checks and controls which would cost so much as to leave no profit to the business at the present time or in future expectancy, the proprietor would have no incentive to continue the business. So the practical problem is to see what can be done in organization, check, and control which will not involve an undue cost.

Just what can be done in any particular case will probably depend on many points such as the nature of the business, the abilities of the various employees, even on the office lay-out. We may try to see that there is a separation of duties to give certain automatic checks. There is a better check and control if the duty of receiving and depositing cash is separated from the duty of

preparing the bills for goods shipped and keeping track of the balances due on accounts receivable, instead of having all this work done by a single person. Also, there is a better check in having the payment of bills in cash or by check separated from the preparation and approval of the bills and their entry in the accounts. The bookkeeper can keep accounts which will serve as control of the goods received and shipped, the cash received, paid out, and on hand, inventories, accounts receivable, etc. Further, the office manager or chief clerk can do some checking to see that amounts on hand or owing accord with the amounts called for by the controlling accounts. Perhaps even the proprietor will take occasion to review the list of accounts receivable to see what is owing and why, which practice may easily develop into a personal verification by him of the outstanding balances. Also, he may check the payroll and otherwise supplement what his employees are doing. As soon as we start on this independent check and verification of the accounts, we are getting into the stage of internal audit as distinguished from mere check and control in the accounts themselves or in the normal course of accounting work, since here we are having one person examine and verify the correctness of the work done by another or others. As a feature of the internal auditing we may perhaps arrange that the petty cash of the cashier will be from time to time counted and checked against the book accounts by one of the employees other than the cashier or the bookkeeper. This definitely is internal auditing.

Now revert to our illustration of the outside accountant who may have been brought in for a few hours' work each week or month in preparing a set of accounts. In that case we said he could hardly be considered as an independent auditor, because he would simply be checking his own accounts. When, however, the work of the business has been so organized that all the accounts and records are being kept by employees, the outside accountant will not be checking over accounts which he himself has prepared, but he will deal solely with the examination and verification of the accounts of others. Then his examination and verification can be considered as constituting an independent audit (assuming that he is not so financially interested in the business or otherwise so connected as to disqualify him from being considered as an *independent* auditor).

Coming into a small business of that kind, which does not have its own internal auditor, the outside accountant may be doing many things in the course of his examination which in a larger concern might be done by an internal auditing force. In the large organization, the independent auditor, on reviewing and testing what has been done by the internal auditing staff, will not consider it necessary that he duplicate much of their work. In the small business without its internal auditors, the outside auditor will naturally examine more in detail and make more extended checks. He is not prevented from taking into consideration the internal accounting checks and controls which exist and whatever may be done by having one employee check the work of others. The more regularly and systematically the work is done, and the better the record of what has been done and the results disclosed, the more reliance the independent auditor can place upon it. If the internal system is faulty, or inadequate, it leaves more work for the outside auditor. However, if what he does is, in fact, done as an independent auditor, his work is not to be robbed of its character as an independent audit merely because some of the work which he does is that which in other cases might be done by internal auditors.

(4) Now assume that the business has still further increased and the organization has grown to a point where it can afford to

and should have its own internal auditing force. Assume that it then has two men whose entire duties consist of acting as internal auditors. Just what they should do and how they should do it in any case will depend on the particular circumstances of that case.

In general, their duties would be along two lines: first—to guard against misapplication or leakages of money or property; second—to guard against errors in stating the accounts. Sometimes they are given a third duty which is that of preparing special analyses or compiling special information for use of the financial or administrative officers. This may not really be part of their internal auditing work but rather a duty which may be assigned to them because they may happen to be better accountants than some of the clerks who are ordinarily working with the routine records. Yet such a duty is often hard to distinguish from that of preparing special summaries and analyses as independent checks or controls on the accounts as they have been ordinarily carried. If, for example, the independent auditor notes in reviewing warehouse accounts that an unduly large number of brooms seems to have been issued, he may prepare a special summary as a basis of inquiry as to whether all those brooms were really needed for plant use or whether there was some leak so that the employees were getting brooms to take home for their personal household use. Similarly, he might check over the postage stamp account, or the telephone account, or the stationery and printing account, or traveling expense accounts, and prepare special summaries as a basis for detecting leakages as a part of his internal auditing work. The submission of such summaries to administrative officers may contribute to knowledge of leaks.

Of course, the internal auditor should particularly check cash since that is most vulnerable and the source of greatest temptation. Naturally every employee ought to have such strong homesty and integrity that no temptation would be sufficient to induce him to misappropriate the funds or property of another. Yet we know that many men who really intend to do right are sometimes not strong enough to resist the special stress of temptation if they feel that no one will ever know about it. Most defalcations are by men who were considered absolutely honest and trustworthy. That is the reason they were placed in charge of funds or property. Also, in most cases, the initial steps toward defalcations are taken with the thought that no one will ever know of it, and that in taking money of the employer they are only borrowing it and are going to repay it before anyone finds out about it.

Generally, the money would never have been taken if the employees had felt there was such a system of check and audit that the shortage would be promptly detected. Perhaps it is the very fact that no one seems to care particularly whether the money is there or not that leads some to feel that there is no great harm in their taking some of it, expecting to repay it. The mere evidence that the employer did care enough about it to institute a continual and adequate check might be enough to keep them from temptation. So a good internal audit does have an ethical value, inasmuch as it supplements the prayer, "Lead us not into temptation." We could almost use this as a standard for much of our internal auditing, by asking "What is it that should be done so that no employee shall be tempted to take funds or property with the thought that no one cares paticularly whether he does or not and no one will ever know whether he does or not?" It is not a bad standard for internal auditors to apply in making their checks of cash, of payrolls, of supply accounts, of accounts receivable, and of accounts payable, as well as any other features which will come under the

heading of safeguarding the funds and property of the business.

As to accounting errors, there is a good deal of diversity of practice. In some cases the internal auditors give little attention to this feature. Perhaps it is most often considered as a duty of the internal auditors with respect to branch office or division accounts. If the business has a recognized system or chart of accounting to be followed at the various branches, it will be assumed naturally by financial or administrative officers that the accounts as they come through from the branches have been prepared accordingly, so that the meaning of the various statements is to be thus interpreted. It the accounts are not in accord with the established system, this may lead to wrong conclusions. So it is apt to be the duty of internal auditors, in examining branch office accounts, to see that they are in accord with the established system and to call attention to any corrections which should be made to that end.

Some businesses also charge their auditing departments with responsibility for check of the entire accounting statement, even as to the general balance sheet and income account. This is with the thought that, even though the independent accountants may come in for their audit at the end of the year, the corporation itself has a duty and responsibility to see that its accounts are correct, both as to the month-by-month statements and also as to the annual statement. This is probably the highest standard which can be attained in internal auditing. In theory at least, if not in practice, the independent auditors should be able simply to come in, make their examination, verifications, and tests and report that they find the statements as prepared by the corporation to be in all respects appropriate and proper. Even if we cannot in practice always attain this standard, it is nevertheless a good standard to try to attain.

Manifestly, if the independent auditors, in making their examination and tests, find that every feature of the accounting has been subject to a careful and adequate internal audit (reaching their conclusions not on the basis of any formal statement of program and duties, but because their examination and tests show that the internal auditing has, in fact, been of this nature), the auditors can place much reliance on the internal auditing and correspondingly shorten their own work.

Admitting that in the majority of cases the internal auditing has not exhaustively covered every feature of the accounts, the independent auditor is, however, warranted in placing considerable reliance on the internal audit within the limits that his tests indicate it has satisfactorily been followed out. If he finds, for example, that the internal auditing has been confined to those features classified above as safeguarding the cash and property, but without being extended to check as to correctness of principle of stating the accounts, his own work will need to be planned accordingly. He can give due credence to what his examination and tests show to have been covered by the internal auditing, at the same time that he recognizes the need for his own work to cover more fully those features which have not been the subject of internal audit.

Sometimes we are inclined to think of accounting and auditing standards as those of large business concerns and forget that the majority of business organizations are relatively small. Most public accounting work is with relatively small business concerns. It is well to look at the highest possible accounting standards that can be developed and what can be done where cost is not a major controlling factor. Yet we must remember that small business enterprises still exist and furnish a problem of what can be done best to meet their needs. Hence we need to consider internal audit and control in the small as well as in the large business.

I started with the regulation of the Securities and Exchange Commission and then referred to some of the actual conditions as they exist. In between lie the many questions of what should be done in any particular case; what are the methods and procedures to be followed in internal auditing; how should a proper internal auditing force be organized; what records should be kept of their work; what should the independent accountant do in testing and checking that work and in determining the reliance he can place upon it and how much he should do to supplement it. I have not dealt adequately with the responsibility of internal auditors, or of other accounting officers and employees, for seeing that proper accounting standards are maintained. Yet if we see the objectives we are trying to reach and the conditions from which we must start, we have made progress toward solving our problems and can perhaps then better see how the other factors fit into the picture.

VALUING INVENTORIES IN PROFIT AND LOSS DETERMINATION

Arthur N. Lorig

In again raising the question of inventory valuation, one runs the risk of becoming somewhat unpopular among those now weary from the steady succession of inventory discussions or—what would be worse—of having his article shunned and unread. Perhaps if he avoids repeating well-worn points and arguments, however, and only suggests a possible change in inventory treatment for profit and loss determination, he may escape the indignation of the champions of various valuation theories and may even stir up reading interest on the part of the bored.

There is some justification in emphasizing the profit and loss view of the problem, since the valuation of current assets (including inventories) for balance-sheet purposes does not give rise to much controversy. Were the balance sheet to be considered apart from its relation to operations, nearly all accountants would agree that market prices, if readily determinable, should be used in pricing current assets. After all, the balance sheet purports to show values as of a given moment of time, and the prevailing prices upon the market are the commonly accepted measures of current values. It is principally in the measurement of profit and loss that the valuation of current assets gives rise to differences of opinion.

Widely as inventory valuation theories may vary, they seem always to agree on one point—that the beginning and ending inventories of a given period should be valued by the same method (assuming that "cost or market, whichever is lower" is one method rather than two even though, in the case of a given commodity, it may result in the use of cost for one inventory and market for the other). This article recommends that, if the profit and loss statement is to give the information commonly expected of it, the two inventories require different methods of pricing. The opening inventory should be valued at market price and the closing inventory at cost. (In the case of an item in the closing inventory carried over from the previous period, the cost will be that market price charged in the opening inventory.)

The reasoning back of this proposal is based upon a major purpose of the profit and loss statement. The statement should

be an index of managerial efficiency, indicating whether or not the management is succeeding in making a satisfactory profit in the particular period, or period by period. To provide that information is probably the most important function of accounting, for profit tells whether a change in management may be desirable and shows whether liquidation of the business should be seriously considered. To investors, profit is the clue to the decision to sell stock investments, or buy more stock. Even creditors are primarily interested in this same information as an indication of the safety of their investment.

A satisfactory check upon efficiency of management, however, should exclude from the operating section of the profit and loss statement all items that do not bear directly on the operations of the period. These include not only extraneous items, such as profits and losses resulting from a fire or from the sale of capital assets, but also profits and losses which arose in previous periods but which were not considered as realized until the present period. If operating results exclusive of such influences are set forth, due credit or blame can be much more accurately attributed to management.

It is not intended to imply that such items of profit and loss are not affected by management, for sometimes it may be partly or wholly responsible for them. The amount of a fire loss is definitely influenced by precautions taken against fire and by the amount of insurance carried. Profit or loss on the sale of a capital asset will depend somewhat upon the shrewdness of the management in making the sale, the past depreciation policy, and the conditions surrounding the sale (e.g., loss because of an early sale may be more than compensated by increased efficiency resulting from new, improved equipment acquired to replace the old). Fluctuation in the value of inventoried commodities may have been anticipated by the management in such a way as to bring profits to the organization, or losses on inventories might have been avoided if changes in value had been accurately foreseen. Nevertheless, such profits and losses are unusual in the sense that they are not a part of normal operations *for the period in question*. A better index of managerial efficiency is obtained if they are separated from the results of operations in order that both classes may be studied individually.

Most extraneous profits and losses can be easily identified and separated from the operating results. In fact it is customary to do this. But profits (and sometimes losses) due to fluctuations in the value of inventoried items, arising in previous periods and realized in the current period, are not separated in practice. They are left buried in the operating figures for the current period, which are consequently somewhat misleading.

The real value of the proposed procedure lies in its avoidance of this result. If the inventory at the beginning of the accounting period is charged into cost of sales at market price, this clips off the effect of those price fluctuations in inventoried goods which had occurred in previous periods, and starts the current period free of such influences. If the closing inventory is shown at cost and the opening inventory at market, the cost of goods sold during the period is calculated at approximately that cost which would have been incurred had the business started operations at the beginning of the period. The operating statement therefore would become a truer index of the efficiency of the management in the current period. Whereas, under present procedure, statements for a number of periods must be considered as a unit in order to judge managerial efficiency (because inventory fluctuations distort operating profits and losses as between periods), under the proposed method the succession

of periodic statements would give accurate period-by-period indices of efficiency which together would give an indication of trend.

The steps in the suggested procedure may be outlined as follows:

Charge opening inventory into cost of goods sold at market price (it is the *cost to this period's operations*).

Take closing inventory out of the calculation of cost of goods sold, using cost price. Any variation between cost and market on unsold goods is unearned profit or loss and should not affect the cost of sales. If some of the items appearing in this inventory were carried over from the last period, their "cost" is the inventory price (market) at the beginning of the period.

Show closing inventory in the balance sheet at market price. Rather than to report only the market valuation, however, it is preferable to show the inventory account at cost adjusted to market by means of a valuation account (such as one entitled "Inventory Revaluation") or to show cost in notation form. In this way, the inventory is reconciled with the one reported on the profit and loss statement.

The difference between the closing inventory at market (as shown on the balance sheet) and that same inventory at cost (as shown in the operating statement) is an unrealized profit or loss for the period. To conform to the conservative custom of not recognizing unrealized profits in the profit and loss calculation, if such a difference represented a profit it would properly be carried to a special surplus account, identified as unrealized and therefore not available for dividends. A suggested title for such an account is "Unrealized Profit on Inventory Fluctuations."

Adjust the balance of the "Unrealized Profit on Inventory Fluctuations" account at the end of each period to the amount (if any) properly appertaining to the inventory at that time. The amount of the adjustment would represent the realization during the period of the profit previously reported as unrealized and would be credited to a special account which might properly be called "Profit or Loss on Inventory Fluctuations." Unless some items in the closing inventory were carried forward from the previous period at a market price differing from original cost, the new reserve balance would equal the unrealized profit from inventory fluctuations arising during the current period.

If the difference between the closing inventory valued at cost and the same inventory valued at market reflects a loss, conservatism demands that it be treated in the accounts as though realized. Accepting this dictate, it should be charged directly to the "Profit or Loss on Inventory Fluctuations" account, where it may be offset in whole or in part by the transfer of the balance (if any) in the "Unrealized Profit on Inventory Fluctuations" representing former unrealized profit now realized (see preceding paragraph). The net amount in the "Profit or Loss Inventory Fluctuations" account will be reported as a nonoperating item in the profit and loss statement.

The procedure is not difficult to illustrate. Assume merchandise inventories occurring during a sucession of years as follows:

	Closing Inventory Valued at	
Date	*Cost*	*Market*
Dec. 31, 1936	$40,000	$55,000
Dec. 31, 1937	30,000	50,000
Dec. 31, 1938	45,000	40,000
Dec. 31, 1939	50,000	42,000
Dec. 31, 1940	50,000	50,000
Dec. 31, 1941	40,000	50,000

The journal entries and the special accounts necessary to the described procedure are as follows:

(a)
12/31/36

Merchandise inventory	40,000	
Cost of goods sold		40,000

To set up closing inventory at cost.

(b)

Inventory revaluation	15,000	
Unrealized profit on inventory fluctuations		15,000

To set up unrealized profit on closing inventory.

(c)
12/31/37

Cost of goods sold	55,000	
Merchandise inventory		40,000
Inventory revaluation		15,000

To close opening inventory into cost of goods sold.

(d)

Merchandise inventory	30,000	
Cost of goods sold		30,000

To set up closing inventory at cost.

(e)

Inventory revaluation	20,000	
Unrealized profit on inventory fluctuations		20,000

To set up unrealized profit on closing inventory.

(f)

Unrealized profit on inventory fluctuations	15,000	
Profit or loss on inventory fluctuations		15,000

To set up realized profit on opening inventory.

(g)
12/31/38

Cost of goods sold	50,000	
Merchandise inventory		30,000
Inventory revaluation		20,000

To close opening inventory to cost of goods sold.

(h)

Merchandise inventory	45,000	
Cost of goods sold		45,000

To set up closing inventory at cost.

(i)

Profit or loss on inventory fluctuations	5,000	
Inventory revaluation		5,000

To set up unrealized loss on closing inventory.

(j)

Unrealized profit on inventory fluctuations	20,000	
Profit or loss on inventory fluctuations		20,000

To set up realized profit on opening inventory.

(k)
12/31/39

Cost of goods sold	40,000	
Inventory revaluation	5,000	
Merchandise inventory		45,000

To close opening inventory to cost of goods sold.

(l)

Merchandise inventory	50,000	
Cost of goods sold		50,000

To set up closing inventory at cost.

(m)

Profit or loss on inventory fluctuations	8,000	
Inventory revaluation		8,000

To set up unrealized loss on closing inventory.

(n)
12/31/40

Cost of goods sold	42,000	
Inventory revaluation	8,000	
Merchandise inventory		50,000

To close opening inventory to cost of goods sold.

(o)

Merchandise inventory	50,000	
Cost of goods sold		50,000

To set up closing inventory at cost (which is the same as market).

(p)
12/31/41

Cost of goods sold	50,000	
Merchandise inventory		50,000

To close opening inventory to cost of goods sold.

(q)

Merchandise inventory	40,000	
Cost of goods sold		40,000

To set up closing inventory at cost.

(r)

Inventory revaluation	10,000	
Unrealized profit on inventory fluctuations		10,000

To set up unrealized profit on closing inventory.

Merchandise Inventory
(at cost)

12/31/36	(a)	40,000	12/31/37	(c)	40,000
12/31/37	(d)	30,000	12/31/38	(g)	30,000
12/31/38	(h)	45,000	12/31/39	(k)	45,000
12/31/39	(l)	50,000	12/31/40	(n)	50,000
12/31/40	(o)	50,000	12/31/41	(p)	50,000
12/31/41	(q)	40,000			

Inventory Revaluation
(a valuation account)

12/31/36	(b)	15,000	12/31/37	(c)	15,000
12/31/37	(e)	20,000	12/31/38	(g)	20,000
12/31/39	(k)	5,000	12/31/38	(i)	5,000
12/31/40	(n)	8,000	12/31/39	(m)	8,000
12/31/41	(r)	10,000			

Unrealized Profit on Inventory Fluctuations
(reserved surplus)

12/31/37	(f)	15,000	12/31/36	(b)	15,000
12/31/38	(j)	20,000	12/31/37	(e)	20,000
			12/31/41	(r)	10,000

Profit or Loss on Inventory Fluctuations
(a nonoperating account)

12/31/37 To Earned Surplus		15,000	12/31/37	(f)	15,000
12/31/38	(i)	5,000	12/31/38	(j)	20,000
12/31/38 To Earned Surplus		15,000			
12/31/39	(m)	8,000	12/31/39 To Earned Surplus		8,000

In the illustration, the outlined procedure has been carefully followed. In each year cost of goods sold was charged with the current or market value of the opening inventory, and the closing inventory deducted at the price at which it had been included. The value of the closing inventory was adjusted to market by means of a valuation account (although adjustment might have been made directly to the inventory account). Losses on inventory fluctuations in value (in 1938 and 1939) were absorbed immediately into surplus, whereas profits on such fluctuations (in 1936, 1937, and 1941) were deferred until realized.

The illustration assumed that the items in each opening inventory had all been sold by the end of the year. If such were not the case, a slight variation in procedure might be desirable. The amount of unrealized profit applying to those items in the final inventory which were carried over from previous periods would rightfully be left in the "Unrealized Profit on Inventory Fluctuations" account at the end of the year and only the balance applying to the items sold would be closed to the realized profit account. In the new provision for inventory fluctuation there would be included any further fluctuation in those items which might have occurred in the year. (It has been pointed out previously that the "cost" of such items in the closing inventory is the market price charged in the opening inventory; hence the fluctuation for the year will be the change between opening and closing market prices.) The adjusted reserve would then show the full variation between original cost and present market price of all the items in the closing inventory.

In the interests of practicality, this variation in procedure could probably be avoided in most cases. If the items still on hand from the opening inventory are relatively unimportant in value as compared with the total inventory, there presumably would be little sacrifice in accuracy if the total unrealized profit carried forward from the past year were taken up as earned. Furthermore, for items restocked year by year the use of the popular first-in, first-out method of costing inventories would almost invariably allot the inventoried items to the acquisitions for the current year, and this problem would not arise.

An alternative method might be followed in accounting for inventory values to give the same operating results. Under this procedure, only the cost of the closing inventory would be recorded at the end of the

period and reported in the balance sheet. At the start of the new period, however, the inventory would be charged at market price to cost of goods sold. The difference between cost and market would at that time be charged or credited to "Profit or Loss on Inventory Fluctuations." If items in the opening inventory should remain unsold at the end of the year, the difference between their cost and their market value at the beginning, if a significant amount, should be eliminated from cost of goods sold and from the "Profit or Loss on Inventory Fluctuations" account by a reversing entry.

Although this alternative method gives the same net operating result as the one formerly described, it differs in two important aspects. Neither profit nor loss arising from inventory fluctuations would be taken into the nonoperating figures until realized. (Under the method first given, unrealized losses are absorbed in the period in which they arise.) Second, the inventory is included in the balance sheet at cost only. These two features may cause this method to appeal to some who find the first method objectionable.

Some limitations of the proposed change in inventory treatment should be made clear. It is apparent that the process of charging opening inventory to cost of sales at market price and pulling out closing inventory at cost eliminates only those fluctuations in value which properly apply to previous periods. Changes in the market value of goods occurring between either the opening inventory date or (if purchased within the period) the date of purchase and the date of sale are not isolated. They are allowed to affect operating results, since they could not be separated satisfactorily from normal operations for the period. The purpose is to isolate the results of operations for this period (from those of other periods) rather than the results of price fluctuations.

It is also evident that this method is useful only in case "cost or market, whichever is lower," might be considered applicable. Excluded, for example, are instances in which inventories are best priced at cost determined by the "base stock" or "last-in, first-out" methods.

In times like the present, when prices are shifting rather rapidly, the proposed change in inventory accounting would offer its greatest service. The balance sheet would be made to give a truer picture of the current position, and the current ratio would be more significant. Furthermore, the operations for each accounting period would be set forth more nearly divorced from those of other periods. The operating statement would thus become a truer index of current operating efficiency.

INTERNAL AUDITING FOR THE STATE OF NEW YORK*

Samuel Seldon

The State of New York in operating its many and varied governmental activities for its 14 million inhabitants places the responsibility for the conduct of its financial affairs upon the State Comptroller, who is elected by the people for a term of four years.

In a democracy such as ours, the State's business is everyone's business, and the inevitable consequence of failing to make

* Address before the Society of Municipal Accountants.

some person specifically responsible for the conduct of definite phases of its affairs is that everyone's business becomes no one's business. In many spheres of governmental activity, such as policing, administration of justice, and supervision over banks and insurance companies, the failure to establish offices and officials responsible for these activities would be disastrous. In other types of governmental activity, the failure to establish responsibility causes confusion and opens the gateway for waste and high costs. The State Constitution designates the State Comptroller as chief financial officer of the State and specifically outlines his duties which are set forth in even greater detail in the State Finance Law. These duties are as follows: to audit all official accounts; to audit all vouchers before payment; to audit the accrual and collection of all revenues and receipts; and to prescribe methods of accounting.

In auditing the accounts of governmental departments, state institutions, and agencies, the work is divided into two phases: that of office audit and that of field audit. To give a picture of the distinction between, and reasons for, these two types of audit, I will briefly present the background of control over State finances.

The Governor submits to the Legislature a proposed budget prepared from the Budget Director's revision of departmental estimates of receipts and requests for appropriations. Upon passage of the budget by the Legislature the appropriations become law. At the end of the legislative session, the State Comptroller sets up on his books entries showing a consolidation of the budget and all supplementary appropriation acts in minute detail for each bureau, office, or activity of each department. Governmental expenditures fall mainly into two categories: (1) Personal Service, and (2) Other Maintenance and Operation.

A close control is maintained over expenditures for "Personal Service." Salaries, the type and title of positions, and the number of persons to be employed in such positions in each office must be specified by line-item authorizations in the budget, with the exception of lump-sum budgets for those units in the first year of their existence.

The Department of Civil Service must first approve the pay roll of each department before it is submitted to the Comptroller for audit, and it is required to examine into the propriety of each employee's appointment, title, and salary before approving the pay roll. As a matter of efficiency, the Department of Civil Service examines each pay roll in detail in the first pay roll period of January and July of each year, its certification holding good for the succeeding six months with the exception of new appointments, retirements, deaths, dismissals, etc., which are handled separately in each pay roll period.

A similar close control is maintained over the expenditures for "Other Maintenance and Operation." The authorizations for these expenditures must be specific for each State Department and institution by line-items in the budget which clearly show the kind and type of expenditures, in accordance with a plan of analysis established by the Comptroller and the Director of the Budget.

Purchases of materials, equipment, and supplies exceeding $1,000 for any State Department must be made or contracted for directly by the Commissioner of Standards and Purchase by advertising for competitive sealed bids and awarding contracts to the lowest responsible bidder, subject to the audit and approval of the Comptroller. Before any State Department may incur a liability for purchases, it must first submit the proposed purchase order to the Commissioner of Standards and Purchase and to the Comptroller for approval.

Upon approval of the purchase order by the Comptroller, the commitment is entered upon the Comptroller's books as an encumbrance upon the respective appropriation account pending the receipt of the vendor's signed voucher, bearing a statement of a responsible department official as to the receipt of merchandise from or performance of services by the vendor and the official's approval of the invoice. After audit and approval of the vendor's voucher by the Comptroller it is placed on a warrant for payment. The prior audit, or pre-audit, of the proposed purchases and expenditures makes it virtually impossible for a State official to incur a liability for the State: (1) without having an appropriation for the specific purpose; (2) without having an unencumbered appropriation adequate to bear the expenditure, and (3) except under circumstances of submitting proper standards and specifications upon which competitive sealed bids are received after due advertisement of the purchase proposal.

The system of examining purchase and other contracts before they are made, of auditing proposed liabilities before they are incurred, and of auditing disbursements before checks are issued, is known as pre-auditing. This system of auditing transactions before they are consummated provides an effective control over State officials who have the power to make purchase and construction contracts, appoint personnel, incur liabilities, sign checks, buy or sell securities, etc. The extent to which the pre-auditing system has been put in operation in the State of New York is novel and unique among governments. In the few years in which the present system of pre-auditing has been in vogue, it has produced the following benefits:

1. It has given the Comptroller prompt notice of proposed and pending transactions.
2. It has enabled the Comptroller to prevent unwise transactions by other State officials.
3. It has enabled the Comptroller to prevent the incurring by State officials of liabilities in excess of appropriations.
4. It has speeded up the payment of vendors' invoices, thereby enabling the State to take advantage of cash discounts.
5. It has brought various State organizations, such as the State Insurance Fund, under continuous audit of the Comptroller.
6. It has brought under direct audit of the Comptroller and direct payment out of the State Treasury, the audit and payment of bills previously paid by the State institutions and certain State Departments.
7. It has enabled the Comptroller to render prompt service to State officials and to the public to whom he is directly responsible.

With such a system of controls in effect, experience has shown that an office audit—that is, an audit in the office of the State Comptroller in Albany—is adequate for the following types of transactions:

1. The transactions of those departments whose sole transactions are expenditures from appropriations.
2. The expenditures of all departments made from appropriations even though a number of these departments and agencies may engage in other transactions for which an office audit is not adequate.
3. Refunds of taxes and other revenues.

For all other transactions entered into by State Departments and officials a field audit is necessary. The scope of field auditing is as wide as the type of accounting and auditing services to be rendered for the many varied enterprises and activities the State is engaged in. Although few people, even public accountants, realize it, the State is engaged in many different kinds of business, some of which exceed large nationally known corporations in both size and complexity.

Among these enterprises are furniture factories, mattress factories, cotton goods factories, produce farms, bridges, tunnels, port authorities, terminals, grain elevators, an insurance company, hotels, restaurants, amusement and recreation centers, a multitude of trust funds, and others. In addition to these enterprises, all departments of the State are subject to audit for revenues from taxes, licenses and fees, rentals and royalties, transportation and tolls, sales of materials, supplies, and equipment, etc.

Furthermore, the State operates 26 schools and colleges, 27 insane asylums, 15 prisons and reformatories, 6 tuberculosis and other hospitals, and 5 social welfare institutions. In 1941 these institutions had an inmate population of 112,700 and cost about 55 million dollars for normal operating expenses. These institutions are under continual audit by both the office audit and the field audit staff with regard to expenditures for personal service, maintenance and operation, revenue earned from board of inmates, operation of canteens and stores, inmates' deposit and earning accounts, review of inventory control systems, etc.

Every department has some revenue-producing activity, and is therefore subject to field audit. Some departments, such as the Department of Labor, handle funds not belonging to the state and not representing State revenue. These Departments are likewise subject to field audit.

The following types of field audit are regularly conducted by the State Comptroller's staff:

1. *Detailed audits* for the purpose of verifying the revenue reports submitted by department heads to the Comptroller. These audits usually cover all revenue transactions in the period intervening between audits.

2. *Balance-sheet audits* for the purpose of verifying or ascertaining the assets and liabilities of a state organization at a particular date, and of verifying transactions consummated since the previous audit date.

3. *System installations* for the purpose of installing a system of accounts and procedure in new State organizations or improving the systems already in existence in old organizations.

4. *Cost surveys* for the purpose of determining costs of manufacture, cost of maintaining students at State schools and colleges, cost of supervisory services performed by the State to be assessed to banks, insurance companies, and carriers of self-insurance, cost of the State's share of workmen's compensation for State employees injured in the course of employment, and numerous other such problems.

5. *Trust fund audits* for the purpose of determining the propriety of administration of funds deposited in trust with courts, county treasurers, and State officials.

6. *Welfare audits* for the purpose of examining into the claims of cities and welfare districts for reimbursement from the State.

7. *Court and agency audits* for the purpose of verifying the collection and remittance of fines, penalties, fees, and licenses by courts and other agencies of the State.

The essential requirements for a satisfactory complete audit of a State department or agency are as follows:

1. Verification of assets and liabilities as of the close of the audit or fiscal period.

2. Verification of receipts and disbursements, accrued income, and expenditures for the audit period.

3. Inquiry into compliance with legal provisions regarding financial transactions.

4. Inquiry into the practicability or prudence of transactions from the financial viewpoint.

5. Review of the system of accounts and system of internal control.

6. Inquiry into the bonding of employees who handle money, securities, etc.

The report of a complete audit of a State department or agency should include the following subject matter:

1. Description of the essential financial activities of the organization.
2. Names and titles of responsible officials.
3. Comparative balance sheets as of beginning and close of audit period with appropriate comments on each major item included in the balance sheets.
4. Comparative statements of profit and loss, or of receipts and disbursements, as may be appropriate, by fiscal years, or by natural business years if the organization's business is operated on that basis, with appropriate comments on each major item requiring comment.
5. Inventories of merchandise, license forms, securities, etc.
6. Reconciliations of bank accounts and comments regarding the adequacy of the banks' security deposits, internal control over receipts and disbursements, etc.
7. Schedules supporting other major items which appear on the balance sheet and operating statements.
8. Schedules of employees' surety bonds.
9. Comment in regard to the adequacy of the system of accounts, the system of internal check, and the maintenance of the records and accounts.

The auditor on the State Comptroller's staff must, in addition to knowledge of the principles and practice of accounting, auditing, commercial law, and taxes such as is required of the average independent public accountant, have the following:

1. Knowledge of the Federal and State Constitutions.
2. Knowledge of the State Finance Law, Municipal Law, Village Law, Public Officers' Law, State Departments Law, and Civil Service Law.
3. Knowledge of Workmen's Compensation Insurance, Unemployment Insurance, Social Welfare practices, and an understanding of the Social Sciences generally.
4. Knowledge of the history of the State, its political institutions, and its economic background.
5. Knowledge of the activities and businesses engaged in by the various State Departments, commissions, and agencies and their financial problems.

For the proper functioning of the accounting and auditing and controlling duties of the State Comptroller the following policies should be maintained:

1. Complete freedom from political bias in the selection of the auditor and the conduct of audits.
2. Vigorous enforcement of the finance laws without regard to fear or favor of political or personal friends or enemies.
3. Audit of all State departments, commissions, and agencies at regular and frequent intervals.
4. Installation of new systems of accounts or improvement of the old systems in every State office where needed, and when needed, and elimination of the unnecessary duplication of financial records whenever such a condition becomes known.
5. Maintenance of close liaison with the Commissioner of Standards and Purchase, the Director of the Budget, and the Civil Service Commission.
6. Close watch over all proposed legislation in order to oppose any bills containing features opposed to the financial interests of the State.
7. Maintenance of such a standard of probity in all matters affecting his own Department of Audit and Control that the Comptroller's office shall be a shining ex-

ample for all other State departments and officials to follow.

The existing system of controls enables the State to conduct its far-flung and multivarious enterprises and activities with centralization of finances in the Comptroller's main office in Albany. When you consider that the State's annual expenditures run over one billion dollars per year and that its many enterprises exceed in variety, magnitude, and complexity many corporations of national scope, the success of this system of control is a tribute to the fine art and science of modern governmental accounting and to the high caliber of accountants on the field and office staff of the State Comptroller.

THE FEDERAL REGULATORY COMMISSIONS*

PEMBROKE H. BROWN

IN 1887 the Interstate Commerce Commission, the first of our great Federal commissions, was established by act of Congress. The railroad problem was not new in 1887; nor were attempts to solve it unknown. The Congress and the courts had long been troubled by the contentions of railroad companies and the complaints of shippers. It was hoped that by setting up a permanent administrative body with suitable powers the regulatory intent of the Congress might be accomplished more reasonably and effectively. In this way began our experiment with the commission as a device for dealing with economic situations and procedures which are thought to call for government control.

During President Wilson's first term there was a demand for the strengthening of government regulation and for its extension to new areas. Although only one major commission was established at that time, the Federal Trade Commission of 1913, commissions were proposed for banking, agriculture, and public utilities. The debate included not only the fields of activity which should be brought under Federal control, but also the form of organization through which the control should be administered. It was proposed that the government return to its older practice of passing general laws and leave their interpretation and application to suits brought by the Attorney General and to the ordinary processes of litigation. A second proposal suggested that the courts be aided in the settlement of cases involving the application of Federal statutes to business by an extension of the office of surrogate, or by the creation of a new court officer, in order to provide the court with an agency for investigation and fact finding. A third proposal advocated the creation of new commissions with appropriate powers. The decision really lay between the first and the third proposals; the second was never seriously considered.

The establishment of the Federal Trade Commission in 1913 seemed to indicate that the type of agent to excercise governmental control in the various fields of business would take the form of a Federal commission. The creation of the United States Tariff Commission in 1916 and of the Federal Power Commission in 1920, and the extension of the powers of the Interstate Commerce Commission in the same year, tended to confirm this conclu-

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sion. However, it should be noted that, in the other fields proposed for regulation during President Wilson's first term, commissions were not established. Some centralized control was brought into the field of banking by the establishment of the Federal Reserve System but, although the Federal Reserve Board performs many of the functions characteristic of a commission, its procedure is essentially different. The demand for an agricultural commission was met by increasing the powers and responsibilities of the Secretary of Agriculture. The regulation of public utilities was left to the states.

After Franklin D. Roosevelt became President in 1933, commissions blossomed like dandelions in the spring. Some were short-lived; some were of little importance; but at least two seem likely to remain significant in the regulatory structure of the Federal government. These two are the Securities and Exchange Commission and the Federal Communications Commission, both established in 1934. In addition to the acts creating new commissions, the Congress, since 1933, has passed legislation strengthening and extending the powers of several of the older commissions.

Although it cannot be said that at present the organization of Federal regulation of business is complete, it seems reasonable to conclude that as a result of some fifty years of development the structure of Federal regulation has been determined. It is likely that the commission will remain the characteristic agency for the exercise of Federal control, that the powers of present commissions will be expanded and adjusted as seems necessary or desirable, and that new commissions will be created if the government extends its regulation to new fields or if a regrouping of existing regulatory powers is deemed advisable.

Altogether, results have vindicated the decision to use the commission form. This form is flexible and can be adapted to a variety of circumstances. The characteristic procedure by hearings and orders seems fair and reasonable. Commission personnel has been competent. Some difficulties, however, have arisen. The relationship of the commissions to the courts has presented troublesome problems, and there are certain natural limits beyond which the commission form is somewhat ineffective.

The decisions of the commissions are generally subject to court review. If the person or persons against whom an order has been issued feel that the order has been issued improperly, is illegal, or is not in keeping with the evidence presented, an appeal to the courts is possible. If the appeal follows a hearing the case goes to the court on the record. Therefore the commission hearings must be of record, and the record must be in such form that a court can accept it. In other words, the commissions in their hearings must follow the rules of evidence. A commission is not a court but was devised as a means to secure a less formal procedure than is possible in a court; however, because of this right of appeal, commission procedure is forced into a legalistic mold and the commissions have become quasi-judicial bodies. The handling of cases before commissions has become a special and profitable branch of legal practice. The hope was that commission procedure would be speedy and cheap; instead, it tends to be slow and costly.

Although the right of appeal limits the effectiveness of the commissions, a satisfactory alternative is not easy to find. The right of the individual to his day in court is fundamental in our law. It is not likely that this right will be surrendered; nor does it seem desirable that it be compromised. Probably it is better to operate with less effective commissions than to deny access to the courts to those who demand justice. There are, of course, large areas in the activities of the commissions in

which the findings of the commissions are final. The fact-finding activities, the reporting activities, and others of similar nature are of this kind, and are not subject to court review provided such activities are within the powers of the commission. The entire problem of the relation of the commissions to the courts seems to lie in the field of administrative law. It is to be hoped that grants of powers will be made in such ways as to avoid legal friction and that proper procedures within the commissions will evolve. However, it does not seem likely that commissions will cease to be quasi-judicial in their procedure.

There seems to be no limit to the amount of routine work a commission staff can do. The addition of a few more clerks and a few more machines will usually solve the problem of additional computations, tabulations, and the like. But in those areas in which the commission is expected to exercise judgment the problem is less simple. Nominally, powers are granted to the commissioners, and the judgment exercised is the judgment of the commissioners or of a majority of them. Practically, it is impossible for all the commissioners, or even for a majority of them, to delve carefully into every case. They must, of necessity, accept most of the decisions which come up to them from the staff. The result is that the judgment exercised is the judgment of some member of the staff, not of the commissioners. This is not necessarily a bad thing; in fact, it may be a very good thing because, after all, the members of the staff who make the investigations are likely to be better informed than are the commissioners themselves. If the commissioners can surround themselves with competent persons, each well informed in his special field, the composite judgment should be as trustworthy as can be hoped for from public agencies. If the work of the commission falls into a pattern or into a series of patterns, the chance of successful regulation is excellent. If no pattern appears, because of either the complexities of the problems, the uncertainties of the goals, or the rapid change of economic conditions, the chance of successful regulation is not so good. It seems, then, that the requirements for good regulation are: (1) a field not too complex, (2) a well-organized and competent staff, and (3) careful, judicious commissioners. Granted these, the task should be well done. If, in addition, the commission has the confidence of business leaders in the field, the situation will apparently be ideal. This does not mean that railroad presidents must always see eye to eye with the Interstate Commerce Commission or that bankers must always agree with the rulings of the Securities and Exchange Commission; but it does mean that regulation will be more effective if the operators in the field believe that the commission will deal with them fairly and honestly, and that decisions will be carefully considered, not arbitrarily imposed—that they will be realistic, not doctrinaire.

A reference to the history of the Securities and Exchange Commission, one of the most recent additions to the family of Federal commissions, may illustrate some of the problems mentioned above. The idea of Federal regulation of the issue of securities is not new.[1] A bill to that end was introduced as early as 1918; but no effective action was taken until the passage of the Securities Act of 1933. In 1934, the Securities Exchange Act was passed and it was this act which created the Securities and Exchange Commission. The investing public, especially persons of moderate and small means, welcomed Federal regulation. The growth of the use of the corporate form, the consolidation movement, and

[1] Geo. W. Edwards, ***Evolution of Finance Capitalism*** (Longmans-Green, 1938), pp. 310–313 cites House Doc. 1485 (65th Congress, 3d Session, 1918) and Hearings before the Committee on the Judiciary on H.R. 188, (66th Congress, 1st session, 1919).

the increasing burden of local taxes on mortgages had made it difficult for the investor to find investment opportunities which he could value on the basis of his own knowledge. He was almost forced into the hands of the investment bankers and was obliged to accept their judgment rather than his own. There was a feeling that the market break of 1920 and the more disastrous break of 1929 indicated that the judgment of investment bankers was not trustworthy. It is likely that this attitude was less than fair to most of the members of the banking fraternity. They were caught in the same troubled situation; their customers asked for investments but wanted sure and highly profitable speculations; and many of the old standards for judging securities were no longer valid. However, there were sufficient examples of irresponsible dealing and of bad business judgment to give point to the rather general criticism. Regulation seemed the way out.

The Securities Act of 1933 depends on the old Gladstonian principle of full disclosure as a means of protecting investors.[2] The theory of the Act is that if full information is given to investors they will be able to take care of themselves. The Commission is not required to evaluate the securities—to label them as either good or bad; it is only required to see to it that when new securities are issued the information circulated concerning them is adequate and accurate. This method of protecting the investor is open to criticism. It does not free him from the investment banker; it is likely that the average investor would need the help of an expert to interpret the prospectus which the Commission authorizes. However, the procedure of the Commission does accomplish several things. It brings to light information that would not have been published except under Commission insistence. It provides a statement against which the claims of bond and stock salesmen can be measured. Since much of the information refers to the corporation which issues the securities and indicates the condition of the corporate entity, it is of more than mere temporary significance. It would not be an impossible task for the Commission to rate securities. Several agencies which publish ratings of securities have done so for many years. These however, are private agencies which sell a service to subscribers. The position of a public agency would be somewhat different and such rating practice might lead to continuous litigation. The Commission does protect the investor in so far as the mere existence of the Commission and the requirement that full information be provided are sufficient to discourage the issuance, or attempt at issuance, of worthless securities.

The Commission has attained a very high standard in its efforts to administer the Securities Act. It is precisely the kind of work which a commission does well. It falls into a pattern which permits the staff members to become informed in a single segment of the field, and the work presents sufficient routine that much of it can be done by clerks. Fortunately, the Commission seems to have moderated the outspoken hostility to investment bankers which marked its early days. The body of data in the Commission files provides the staff with the information and background which were lacking when the Commission was new. The criticism that the Commission does not continue to provide information about securities after they have once been issued is met in part by the administration of the Securities Exchange Act of 1934. Corporations whose issued securities have been listed must publish regularly statements which are adequate and fully disclose the condition of the corporation.

The powers and responsibilities of the

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[2] Edwards, *op. cit.*, p. 25.

Securities and Exchange Commission have grown rapidly. Perhaps this can be shown best by listing the acts under which the Commission operates.

Securities Act of 1933—provides for the registration of new securities and for the suppression of fraudulent practices in the sale of new securities.

Securities Exchange Act of 1934—provides for the supervision and regulation of transactions in securities both in organized exchanges and in over-the-counter markets.

Public Utility Holding Company Act of 1935—provides for the regulation of the financial practices of gas and electric holding companies, for the simplification of holding-company structure, and for the integration of holding-company systems.

Chapter X of the National Bankruptcy Act (1938)—provides for the participation of the Commission in the plans and procedures of reorganization of corporations.

Trust Indenture Act of 1939—provides for the supervision of trustees who act under indentures drawn in connection with sales of new securities.

Investment Company Act of 1940—provides for the regulation of investment companies.

Investment Advisers Act of 1940—provides for the regulation of investment advisers.

This rapid extension of function gives point to the statement above that regulation by commission really means regulation by the commission staff. Certainly the public has as vital an interest in the capacity of an employee of the Commission as it has in that of a commissioner. Although the Commission administers seven different acts, they all relate to the same problem: that is, the issuance and sale of securities. Little, if anything, would have been gained by setting up another commission to administer some of these acts, and probably much would have been lost.

The problem of coöperation between commissions concerned with the same problem has yet to be worked out. The Securities and Exchange Commission is linked with the Federal Reserve Board in the regulation of brokers' loans, and with the Federal Power Commission in the regulation of utilities, since the Power Commission controls the interstate rates on electricity. It seems likely that in the future there will be more need for comity among commissions than there has been in the past.

In summary, it may be said that as a nation we have committed ourselves to the Federal commission as the principal agency for the regulation of business, and that any extension of government control of business is likely to result in the granting of new powers to old commissions or in the creation of new commissions. The problems involved in the relation of the commissions to the courts have given the commissions a legalistic procedure which, if undesirable, is still inescapable. The strength of the commission system lies in an adequate and competent staff. It is likely that in the future relationships between commissions will be more important than in the past. That is, the commissions are likely to become a regulatory network rather than simple, unrelated adventures.

ACCOUNTING PROBLEMS OF CARTELS

Ernest M. Doblin

In accordance with the traditional definition, the term "cartel" is used here to include all kinds of horizontal associations of independent firms with the purpose of influencing market conditions through common action. As long as cartels limit their activities to term-fixing or price-fixing they do not have any accounting problems of their own. The situation is different when they begin to regulate production or sales directly. Although the law does not permit such organizations in this country, shortage of materials and the need for allocating their use create problems which in some respect resemble those confronting cartels. A discussion of some cartel accounting questions may, therefore, have more than academic interest.

The cartels under consideration may be conveniently grouped into those which merely fix output or sales of their individual members (quota cartels), and those which in addition act as central distributing or selling agencies (syndicates). For all of them a threefold task in involved: first, to determine the relative participation of the individual member—his quota; second, to decide upon the total volume to be produced within a given period; third, to control production or sales of the members, to take care of deviations from the scheduled volume, and, for syndicates, to distribute the collected receipts among the partners. It is particularly this last function which calls for an elaborate cartel accounting system. The second set of questions is beyond the scope of this study. Estimates of future demand based on present market conditions and businessmen's experience are the main factors involved. However, under the first head—fixing the quota—there are also some accounting problems which will be discussed here.

I. The Quota

Cartel policy aims at the regulation of production, purchases, or sales of the individual members by fixing for each of them definite quantities to be produced, purchased, or sold within the accounting period. The starting point of rational cartel technique consists in determining the relative size of these quantities.

Some terms have to be introduced and defined here. The stipulated share of a member will be called his "quota." It may take the form of a percentage or fraction of total permitted output or simply represent a dollar or volume figure. Since the rate of plant utilization is fixed from time to time for the industry as a whole, the stipulated individual quantities vary accordingly from one accounting period to the other, leaving the relative participation unchanged. The scheduled quantity within an accounting period will be called the "contingent" of the cartel member. The total scheduled quantity of the firms united in the cartel will be called the "cartel contingent."

As a high quota establishes a favorable starting point for all future operations of the member it is naturally a subject of heavy bargaining, market struggles between prospective cartel partners, and transactions which serve no economic purpose other than to inflate these claims (such as decided overinvestments and sales involving heavy losses). Nevertheless, there are some fundamental criteria for the determination of the quota.

The legal aspects of the matter can merely be touched upon here. The quota is a right to produce, purchase, or sell certain quantities of goods, granted to a concern by an agency of superior authority, such as a voluntary cartel or a government agency. The concomitant

right to participate accordingly in the management of the cartel is often, but not always, involved. It is a matter of legal debate whether, and to what extent, the right exists independently of other legal properties of the concern, more specifically whether it can be sold without outright sale of the firm itself. It may also be added that occasionally the contingent takes the form of an obligation, e.g., when certain Central European sugar-beet producers combined in a cartel have to deliver a certain fixed quantity to a group of raw-sugar producers.

Normally, however, contingents and quotas are rights, entitling a firm to buy, produce, or sell fixed quantities in order to limit the total volume on the market. In most instances they are expressed in terms of volume, though they occasionally refer to values, e.g., in the machinery industry or some textile branches where the heterogeneity of the product prevents any other procedure. It makes no difference, of course, whether the participation takes the form of a percentage of an absolute total to be fixed for each accounting period, or a quantity figure stated once and for all, with varying stipulated rates of utilization.

Usually, either capacity figures or sales figures are the basis of rational quotas. The determination of capacity often involves considerable well known difficulties. It is relatively simple in branches such as the steel industry where number and size of blast furnaces supply an objective measure, or in certain textile branches (number of spindles), or the cement or brick industry where simple technical data allow definite statements as to the maximum output of the plants. The following are questions which arise again and again if quotas are expressed in terms of relative capacity:

(a) Capacity under "normal" conditions or under continuous peak production? The relation between these two sets of conditions is not necessarily the same for different concerns.

(b) To what extent is stand-by capacity to be included?

(c) Capacity of which part of the plant; energy used; size of which sector of the plant if the process of production goes through several stages; actual maximum output?

(d) Capacity at what time? How are plant extensions and how is future plant expansion to be treated?

(e) The treatment of differences in quality. Three methods present themselves: either the differences are disregarded; or each variety receives its special quota; or a system of "equivalence" figures is established by expressing all products in terms of a standard product (corresponding to the procedure used by the U. S. Steel Corporation in its TNEC study on costs and volume). It has proved difficult in practice to restrict some products of a plant while leaving others free. German steel cartels before the first World War were mainly engaged in controlling the heavy products while light steel products remained, by and large, unrestricted. Consequently the limitations imposed on the heavy production during depressions used to be accompanied by increased production of light steel. The postwar steel cartels comprised light products as well, thus adding considerably to the strength of the steel cartel system.

Though relative capacity seems to offer an equitable basis for computing cartel quotas, certain unsatisfactory aspects must not be overlooked. The method cannot take into account differences in the efficiency of the management, in the financial strength of the various member firms, in the availability of an appropriate labor force and of raw materials, in plant location, and a number of similar factors which, together with plant capacity, are decisive for the scope of actual production. Under these circumstances many cartels select measures other than capacity data for quota purposes. The choice rests between production and sales. On practical grounds sales figures are usually preferred, since production data can, for the most

part, only be obtained from internal statistics which are sometimes doubtful. Sales data, on the other hand, may be safely checked with the help of invoices and other documentary proof originating from current dealings between the concern and its customers. A decision has to be made between sales established by sales contracts and deliveries measured by billings. Usually some types of "sales" are deducted from the total, such as deliveries in kind to workers (coal), charity gifts, retail sales to some extent, occasionally exports. The crucial point is the self-contained consumption of the concern and its affiliates, which will be discussed at a later stage.

Much depends upon the time period which forms the basis of comparison. Data comprising very short periods may be affected too much by random events too favorable or unfavorable to some members. Very long periods which avoid this hazard tend to burden the quotas with data which no longer have any actual importance. All the problems known from the excess-profits-tax discussion reappear in this context: the diverging interests of stable, expanding, and contracting concerns; and the different reactions of the various concerns of an industry in the various stages of a cycle. The usual solution is a compromise, with an average of the three best of the last five years or a similar formula as the result.

Sometimes capacity and sales data are used in combination to obtain a fair set of quotas. Moreover, special factors are taken into account such as relative underemployment of plants resulting from temporary cutthroat competition, etc. No method exists to fix quotas logically and to the satisfaction of every member for a very long period. The freezing of the existing set-up comes into conflict with changing economic conditions, and economic progress calls for a thorough revision of the participation figures from time to time.

II. QUANTITY CLEARING

The remaining tasks which involve special accounting are operations with a view to adjusting actual to stipulated output, and, for syndicates, to ascertain the share of each member in the total receipts. The German practice has introduced the two somewhat misleading terms ***Mengenausgleich*** and ***Wertausgleich*** for the two operations, which in this paper will be called quantity clearing and distribution accounting.

(1) *The Mechanism*

The general idea of quantity clearing is elementary. Actual sales and scheduled sales do not necessarily coincide. A concern with actual sales higher than the contingent has a "surplus," otherwise a "deficit." A fine is levied on surplus concerns and transferred to the other members.

Cumulated deficits are not necessarily equal to cumulated surpluses. This fact complicates the cartel accounting system, since all clearing forms consist in the last analysis in the transfer of unscheduled surplus gains to deficit concerns. It is obviously impossible to cancel a general excess of sales above the cartel contingent within the accounting period. Although individual excess sales are punished by some sort of levy, the amount in question is necessarily to be redistributed among the cartel members. If it were like a tax turned over to the government or in any way withheld from the cartel members the pressure against excess sales could be strengthened. But even in the case of compulsory cartels this does not happen. Cartel quantity clearing can merely succeed in correcting individual variations in the degree of deviation from the quota.

Nevertheless, the clearing acts as a brake against undue expansion of sales,

as long as the excess of the various concerns is unequal in size, and thus concerns with relatively small surpluses may derive benefits from those with larger surpluses. Against constant wholesale excess sales and consistent break of cartel discipline, however, no form of clearing offers sufficient help.

(2) *The Methods*

(a) Equalization in kind. The deficit concerns are entitled to take over from the other members the excess quantities, or to have transferred to them as many orders as are required to cover the difference. The method is crude but occasionally used by smaller cartels. It is illustrated by the following table:

Concern	*Contingent*	*Actual Sales*	*Surplus*	*Deficit*	*New Contingent*
A.	500 tons	530 tons	30 tons	—	500 tons
B.	600	560	—	40 tons	600
C.	800	810	10	—	800
	1,900 tons	1,900 tons	40 tons	40 tons	1,900 tons

B receives 30 tons of orders from A and 10 tons from C.

(b) Equalization by transfer to new account. The contingents of the following period are adjusted so that the previous sales surpluses are deducted from and the previous deficits added to the contingent figures of the new period. The method can easily take care of those cases where surplus sales taken together are larger or smaller than deficits, by a corresponding change of the total cartel contingent before the adjustment. Special regulations are necessary for the time of cartel dissolution when no new account can be opened. This method is illustrated by the following table:

Concern	*Contingent*	*Actual Sales*	*Surplus*	*Deficit*	*New Contingent*
A.	500 tons	530 tons	30 tons	—	470 tons
B.	600	560	—	40 tons	640
C.	800	810	10	—	790
	1,900 tons	1,900 tons	40 tons	40 tons	1,900 tons

(c) Equalization of profits. This is the most usual form. Sales above the schedule are punished by penalty payments in proportion to the surplus quantities, to be distributed among the members remaining behind schedule in proportion to their quantitative deficits. The fine per ton corresponds roughly to the average profit in the industry in order to limit the incentive to overproduction. Sometimes it is differentiated according to the size of the concern and increases with the size of the surplus. The method applied is illustrated by the following table:

Concern	*Contingent*	*Actual Sales*	*Surplus*	*Deficit*	*Profit Clearing*		*New Contingent*
					Receives	*Pays**	
A.	500 tons	530 tons	30 tons	—	—	$15	500 tons
B.	600	560	—	40 tons	$20	—	600
C.	800	810	10	—	—	5	800
	1,900 tons	1,900 tons	40 tons	40 tons	$20	$20	1,900 tons

* 50 cents per ton.

(d) Price equalization. Whenever prices rise during the accounting period, these three methods do not fully compensate the deficit members for their damage. Additional transfer payments may become necessary to take care of price differences. In combinations with the procedure under (c) a price increase of 25 cents per ton would be settled according to the following pattern:

					Price Clearing		*Profit Clearing*		
Concern	*Contingent*	*Actual Sales*	*Surplus*	*Deficit*	*Receives*	*Pays*	*Receives*	*Pays*	*New Contingent*
A........	500 tons	530 tons	30 tons	—	—	$ 7.50	—	$15	500 tons
B........	600	460	—	40	$10	—	$20	—	600
C........	800	810	10	—	—	2.50	—	5	800
	1,900 tons	1,900 tons	40 tons	40 tons	$10	$10.00	$20	$20	1,900 tons

(3) *Initial Adjustments*

It has been assumed up to this point that differences subject to quantity clearing are computed from actual sales and contingents. In reality, sales figures are somewhat adjusted. Items which are deducted from quota computations—such as retail sales, deliveries in kind to workers, etc.—are deductible from the sales figures as well. Most important among them is the self-contained consumption. The issue is acute in all integrated concerns, mainly in the combined coal-and-steel-producing units. Since that part of coal production taken over by the affiliated steel-producing plants does not enter the market directly, separate treatment is regarded as appropriate for it. The problem may arise either in connection with the immediate self-contained consumption, or with the consumption of the associated firms within the group. Self-contained consumption is a complex issue, particularly for cyclical reasons. The rate of self-consumption to total production varies over the cycle. In periods of business recession coal mines within vertical combinations are to some extent protected as compared with mines working solely for the market.

Various methods have been developed to deal with this part of the output in quantity clearing.

(a) It is exempted from the computation of the contingent, from the quota, and from quantity clearing.
(b) It is separately limited, receiving its own contingent. It may be subject to the same fines as the excess over the proper contingent, or to different restrictions.
(c) It may come under the quota of the member, so that he is able to shift the share of self-contained consumption to total output according to market conditions. It may be treated in the same way as outside sales with regard to quantity clearing, or more leniently.

The form under (b) is most favorable and that under (a) most unfavorable for integrated concerns.

(4) *Limitations Of Quantity Clearing*

A major difficulty derives from the fact that the traditional cartel technique of restricting the rate of plant utilization equally for all members contains in fact an element of inequality. The break-even point of various concerns in the same industry differs, and an output limitation to a certain percentage of capacity may guarantee a fair profit for one concern and involve heavy losses for another. In existing cartel contracts this point has been given little attention, although it contributed heavily to the difficulties of cartels in the early thirties. A number of suggestions have been made involving concentration of production in the more efficient units, thus giving up the basic cartel concept of

equal treatment of each member in a formal sense. The unutilized plant would have to be compensated by special payments. This is in line with the cartel practice of increasing the participation of a member by the purchase of the participation of other members—with the difference that in this event the transfer would be of a temporary character. Another suggested method (for syndicates only) is a differentiation of prices paid by the syndicates to their members according to the individual cost situation. In practice the rate of restriction for smaller units is occasionally kept within somewhat narrower bounds than for the regular cartel members.

III. SYNDICATE DISTRIBUTION

In the highest cartel forms—the syndicates—the cartel acts in various legal forms as selling agency for its members. Payments for goods delivered go through the cartel to the participating members according to rules established in the cartel contract. The leading principle is to secure an equal price for each member, meaning a distribution of total receipts in proportion to the individual quotas. Actually the procedure is somewhat more refined due mainly to the fact that sales prices differ for various reasons, and local differences call for an adjustment of the freight burden.

(1) The main source of price differences is the existence of competitive regions where the cartel cannot enforce its listed prices. Apart from cartel exports, this refers to sales to districts within the reach of outsiders or foreign competition in the home area. The coal syndicates, for instance, had to deviate from their established prices in the northwestern coastal district which could profit from cheaper British coal. In all these instances prices are averaged in order to keep alive the cartel interest of those members who happen to be forced by local or other reasons to sell mainly into "unprotected" regions. Methods are not, however, rigidly uniform and it is at least questionable whether all the differences should be equalized. If sales of a concern by virtue of its location are mainly directed into export channels, the assumption seems justified that originally some compensatory cost advantage (cheap labor, raw material, etc.) caused the establishment of the plant at that very location. Thus sometimes merely part of the differential is financed from the surplus of the other cartel members.

A number of cartels, primarily in the steel industry, used to pay export bounties to their customers in proportion to the steel content of their manufactured exports. The item in question is separated and paid out in advance before distribution to members begins.

(2) Cartel expenses. Under this heading come the current expenditures of cartel management such as salaries, rents, wire expenses (which are usually high), etc. They, too, are covered by deductions from the fund destined for distribution.

(3) Special prices. Whenever the product is differentiated and additional prices are set for special services, measures, forms, and shapes, they are dealt with separately. They are not subject to the cartel distribution process but paid out directly to the individual members who rendered these services. The treatment of mere quality differences has already been discussed.

(4) Freight charges. Whether the cartel should equalize the different freight charges and freight absorptions paid by its members is doubtful, for the reasons advanced under (1) where differences arising out of local advantages were dealt with. The distribution procedure allows their exclusion as well as their inclusion, and the practice varies from cartel to cartel.

I. Quantity Clearing

Concern	Quota (per cent)	Actual Sales (1,000 tons)	Sales Quotawise (1,000 tons)	Differences (1,000 tons)	Profit Clearing (40¢ per ton) To Pay	Profit Clearing (40¢ per ton) To Receive
A.	15	35	30	+5	$2,000	—
B.	20	45	40	+5	2,000	—
C.	30	52	60	−8	—	$3,200
D.	35	68	70	−2	—	800
	100	200	200		$4,000	$4,000

II. Cartel Profit from Member Sales

Concern	Actual Sales	Basic Cartel Appropriation ($1.80 per ton)	Profit
A.	$ 71,000	$ 63,000	$ 8,000
B.	88,000	81,000	7,000
C.	102,000	93,600	8,400
D.	135,000	122,400	12,600
	$396,000	$360,000	$36,000

III. Cartel Profit and Loss Account

	Debit		Credit
General cartel expenses	$ 6,000	Cartel profit (gross)	$36,000
Net profit	30,000		
	$36,000		$36,000

IV. Cartel Distribution

Concern	Basic Cartel Appropriation	Cartel Net Profit Distribution	Total Claim of Members	Actual Sales	Members To Pay	Members To Receive
A.	$ 63,000	$ 4,500	$ 67,500	$ 71,000	$3,500	—
B.	81,000	6,000	87,000	88,000	1,000	—
C.	93,600	9,000	102,600	102,000	—	$600
D.	122,400	10,500	132,900	135,000	2,100	—
	$360,000	$30,000	$390,000	$396,000	$6,600	$600

V. Total Payment After Basic Appropriation

Concern	From Cartel Distribution To Pay	From Cartel Distribution To Receive	From Profit Clearing To Pay	From Profit Clearing To Receive	Total To Pay	Total To Receive
A.	$3,500	—	$2,000	—	$5,500	—
B.	1,000	—	2,000	—	3,000	—
C.	—	600	—	$3,200	—	$3,800
D.	2,100	—	—	8,000	1,300	—
				Cartel expenses		6,000
					$9,800	$9,800

The Technique of Distribution

The technique, depending in detail upon rules established in the cartel contract, follows in general the pattern described in the tables above.

The first step (I) involves quantity clearing after the initial adjustments have already been arranged. In the example the profit-clearing method is used with the result that members A and B owe $2,000—each compensated by a claim of the other two members of $4,000—together.

Under the assumed conditions, a distribution process is necessary—first, be-

cause the sales price per ton (sales value divided by actual sale quantities) differs slightly for the various partners, and second, because of the expenses of the cartel management which have to be shared by the associated concerns. It is further assumed, in accordance with the rules in many actual cartel contracts, that cartel performs its function as agent only and the members receive payments directly form their cutomers. They owe the cartel their receipts for redistribution which in turn usually consists in a basic appropriation immediately granted, and a final payment at the end of the accounting period. The basic appropriation consists in a payment in proportion to the quantities actually sold, at a rate somewhat around the minimum price expected in the accounting period.

The difference between the basic appropriation (II) and the actual sales value is the cartel gross profit, which reappears in the cartel profit-and-loss statement (III). After deduction of the general cartel expenses the cartel net profit is available for distribution in proportion either to the quotas (IV) or to actual sales. If there is reason to assume that the quantity clearing alone fulfills its function of output limitation insufficiently, a distribution according to the quota seems preferable.

From a comparison of the total value of their sales, the basic appropriation, and the second distribution, the final debts and claims of each member under the cartel distribution process are readily derived. In combination with amounts originating from quantity clearing (V), they give a comprehensive picture of the mutual indebtedness of the cartel members at the end of the accounting period.

THE NEED FOR A STATEMENT OF THE PRINCIPLES UNDERLYING COST ACCOUNTING

ROBERT L. DIXON

IN DISTINGUISHING cost accounting from general or financial accounting, one of the more commonly emphasized points is that cost accounting is carried on primarily as an aid to internal management. Because of this special purpose, cost accounting has tended to develop within each organization in accord with the problems of the particular situation. Since these situations include many thousands of industrial and governmental organizations it is certain that variations in cost accounting practices are numerous.

The fact that cost data are usually considered confidential tends to preserve the variations in practices and procedures mentioned above. In contrast with general financial data, cost computations and cost summaries are rarely embodied in published reports to stockholders; a need for uniformity of principle has, therefore, been lacking.

There have, of course, been certain unifying factors. Trade associations have not only advocated and prepared uniform cost systems, but in some cases have actually suggested the data that should be used in certain overhead computations and product-cost calculations. The publications of the National Association of Cost Accountants, through their wide distribution, have undoubtedly exerted an

important unifying influence. College textbooks in the field of cost accounting, following a monotonously uniform pattern, have caused some tendency toward uniformity of methodology and application of theories. Although in some areas these factors may have produced some degree of uniformity, their over-all effects have not been pronounced.

While the underlying tendencies have been toward individualized cost accounting, another force and need has begun to appear, espedially in the last ten years. Cost accounting reports and calculations, normally the private property of private industry, have begun to come under public scrutiny and to be used as a basis for general, economic decisions relating to governmental statutes. To be specific, the Robinson-Patman Act provides that manufactures must not let price differentials as among competing customers in interstate commerce exceed the differences in cost of production, sale, and distribution to the customers. In the enforcement of this act the Federal Trade Commission analyzes the cost allocation methods and calculations of the vendor, and the vendor must prove that the methods are reasonable. In reading the details of the Standard Brands case, which involved a schedule of prices varying with volume of purchases by possible customers, one is struck with the elaborate reasoning and complicated manner of demonstrating cost differentials.

In the brief lifetime of the National Industrial Recovery Act several cost surveys, mainly within specific branches of trade and industry, were carried out. These involved compilations of costs on comparable bases in connection with determinations of price policies.

Numerous states have enacted "unfair practices acts," which provide that certain classes of products may not be sold by retailers at less than cost, variously defined.

Finally, the present war has brought back the cost problems of World War I, with added complications. The costs which enter into production for war are a matter of great public interest. Certain contracts are priced on the basis of cost plus a fixed fee. What these costs are is no longer a question for inner-sanctum determination. Government procurement officers are required to satisfy themselves and others of the validity of the cost allocations.

In the past year the policy of renegotiation has centered still more public interest on the matter of costs. In the preliminaries of the renegotiation procedure the government agents are expected to appraise the cost allocations as between commercial and war-contract business. They must also give consideration to comparable costs of similar producers, since the contractor is presumed to be entitled to special credit for producing at costs which are lower than those of similar producers.

UNIFORMITY OF PRINCIPLES

The above discussion points out that, although cost accounting by its very nature tends to be nonuniform as among the many business enterprises, relatively recent developments make it desirable that some degree of uniformity, at least as to governing principles, be sought. In the field of financial accounting, in which accountants' reports constitute the basis for decisions by outside interests, the more important fundamental principles are generally agreed upon. The extent of such agreement, however, was not known positively until individual accountants and accounting groups had entered upon a discussion of principles.

The advantages to be derived from a statement of cost accounting principles should be noted. First, and of current importance, a tentative statement of principles would evoke constructive criticism. It is highly unlikely that an original

statement would be as little subject to revision five years later as was the case of the "Tentative Statement of Accounting Principles" of the American Accounting Association, first published in 1936, and revised in 1941. Along with helpful criticism would come useful ideas, which at present are laboratory secrets and as such serve only their immediate users. Second, the multitude of self-trained cost accountants, as well as those with school training, would find such a statement a valuable criterion for their own costing practices. Many of us have one or more pet cost theories which to us seem entirely plausible; we lack, however, any authoritative gauge by which to judge the soundness of our theories. Third, and of great importance as the principles develop and become generally accredited, the public authorities and the industrial accountants would have a common meeting ground for the evaluation of company cost accounting practices.

A further reason for a general survey of cost principles is the fact that some of our present practices may well deserve a thorough overhauling. Accountants are reluctant to give up their established procedures, and as time passes such procedures become more solidly embedded. In this particular connection one may question, for example, the fairly common practice of accumulating *all* the costs of the year's operations in the inventory accounts. Also, is it possible that two definitely different methods can achieve equally satisfactory results? If overhead is assigned to product on an average-capacity basis, are the results comparable with those in which overhead is assigned on a practical-capacity basis? Does the method which assigns materials-handling costs to production on a dollar-value basis achieve a result which is fundamentally the same as that obtained if such costs are assigned on the basis of physical weight, or on the basis of number of units or requisitions handled? Perhaps each method or theory is correct in view of attendant circumstances; yet, until some attempt is made to bring together a concise statement of basic principles and objectives, one may well question such divergences.

Finally, the fact should not be overlooked that in many cases cost accounting computations, to a very important extent, determine the content of the published financial statements. This may be the most important reason of all for urging the development of a statement of principles. Inventory values computed by a variety of standard cost methods, on the one hand, and by a variety of "actual" cost methods, on the other, can scarcely bring about comparable results.

It is undoubtedly true that a first attempt at stating the underlying principles of cost accounting, like the earlier attempts in the financial accounting field will at numerous points explain that "in application this principle must be adapted to fit the circumstances within the particular industry." While to some extent any principle must provide some degree of flexibility, it is very likely that in the long run a surprising degree of unanimity will prevail. At the same time the inevitable criticism of any proposed statement must be borne in mind; namely, that uniformity is synonymous with dull, average performance.

In the general accounting field, underlying principles emerged more or less naturally because of the wide circulation of certified, published financial statements. A statement of the generally accepted principles underlying cost accounting, however, must be derived from much less promising conditions: first, because such "general acceptance" does not at present exist, and, second, because the cost practices of individual concerns are not publicly circulated. Once the job is started, however, there should be no lack of assistance and support.

THEORY OF REPAIRS, MAINTENANCE, AND BETTERMENTS

Earl A. Saliers

The need of an accounting for depreciation of capital assets is generally recognized. The same understanding as regards repairs does not exist. It is known, however, that depreciation and repairs are related; for, to establish a reasonable depreciation rate, it is necessary to consider the policy pursued relative to repairs, since repairs affect the useful life of property. Proper treatment of depreciation is not possible if a neglectful policy in regard to repairs is pursued. Also an inadequate depreciation policy is liable to render unsatisfactory any attempt to treat repairs scientifically.

The word "repairs" has been used with so many varying meanings that its place in the terminology of accounting is questionable. Sometimes it is used synonymously with "maintenance"; sometimes synonymously with "renewals"; sometimes in a sense different from either maintenance or renewals.

Reference to a number of industrial reports indicates considerable use of the term "maintenance and repairs." It seems that the use of this expression is not the result of careful reasoning but of the convention of convenience and a tendency to follow established custom. The distinction between repairs and maintenance is explained by S. S. Wyer as follows:

> Repair costs are expenses incurred to restore the operative efficiency of the plant, subsequent to, or as a result of, a break in the plant.
>
> Maintenance costs are expenses incurred for renewals in anticipating, avoiding, or preventing a breakdown. Maintenance costs are for preventive purposes, while repair costs are for remedial purposes.[1]

There are three recognized methods of accounting for repairs:

1. Under the first plan, all repair costs are charged to current operations. This method is almost universally used because of its simplicity.
2. Under the second plan, repairs are estimated, and provision for them is made in calculating the depreciation rate. When actual expenditures for repairs are incurred the reserve for depreciation is charged.
3. Under the third plan, repairs are apportioned to periods (months or years) in somewhat the same manner as is depreciation. A schedule of estimated repairs which will be required during the useful life of the asset in question is drawn up. The amount is then apportioned to accounting periods, on either a straight-line or a production basis, by means of periodic adjusting entries debiting Repairs account and crediting a Reserve for Repairs account.

An attempt will be made to evaluate the three methods outlined above.

The first method, that of charging all repairs to current operating expense, is based on the theory of averages. In a given business with equipment and buildings of varying ages less is actually expended on repairs for newer assets than on repairs for older assets. Since the investment is fairly distributed between new and old assets (since replacements are constantly being made) it is assumed that repairs are and will continue to be about the same in amount for each period. The validity of this assumption may be questioned, however. Thus, Fabricant says:

> For years prior to 1934 there is little information on maintenance and repairs of industrial enterprises. Figures for 32 large corporations obtained from published reports suggest that

[1] Quoted by R. B. Kester in *Advanced Accounting* (New York: The Ronald Press Company, 1933), 3d rev. ed., p. 16.

charges for maintenance and repairs have fluctuated violently.[2]

A repair made on a machine in the third year of its life is as much attributable to the first year of its operation as to the third year; yet under the plan commonly followed the entire expense of the repair is borne by the third year. As to such practice Perry Mason says:

> Logically there is no more reason for handling repairs in this way than there would be in charging the cost of a building to operations of the month in which it was acquired.[3]

The second method is in some respects superior to the first. Under it a charge for repairs is made a part of the depreciation allowance and the two are indistinguishably merged. This is not good procedure, since repairs are sufficiently significant to tell an important story in the income statement and should therefore be shown separately.

Under the third method separate adjusting entries are made periodically for (a) repairs and (b) depreciation. From a theoretical point of view this is correct; only practical considerations of basic importance should be allowed to stand in the way of its wider adoption.

Since there is no essential difference between the physical aspects of depreciation and the physical aspects of repairs, essentially the same methods should be followed in accounting for both.

The third method obviates some of the difficulties of the first method. Thus in many businesses repairs are made during the off season; in these cases, if the first method is followed the months which show the smallest income bear the heaviest repair costs.

The chief criticism leveled at the third method is to the effect that it is impossible to estimate repair costs, as distinguished from the actual expenditures on repairs. However, a check on past outlays should aid in reaching a fair approximation; still greater accuracy will be attained as experience data accumulate. Occasionally readjustments may be necessary; but this is equally true of estimates of accrued depreciation.

It may be well at this point to summarize the reasons why repairs should be distinguished from maintenance. Maintenance charges tend to vary with operations; repairs, on the other hand, result from cumulative wear. Maintenance cost is a current operating expense which should be charged as actual expenditures therefor are made. Too rarely is the item of repairs shown separately in present-day financial statements. This could be done if repair costs were accounted for in accordance with the third method. In support of this contention, the following quotation is submitted:

> If proper repairs are not made, the property of a going concern deteriorates to an extent not covered by ordinary depreciation . . . . If the repairs and maintenance accounts are unduly low for the period under examination, the auditor should endeavor to ascertain a fair average allowance for such expense, and the deficiency should be charged to operating expenses and be offset by the setting up of a reserve account.[4]

Evidently, the repair policy pursued is an important factor in determining the depreciation rate; it is customary to assume that repair expenditures will be sufficiently large to keep the property in first-rate condition. If a concern fails to do this, not only is the useful life of the property shortened; its output is reduced and its operating costs increased. Neglected repairs are commonly referred to as "deferred maintenance." Such deferred maintenance may be implied if actual expendi-

[2] S. Fabricant, *Capital Consumption and Adjustment* (New York: National Bureau of Economic Research, 1938), p. 47.

[3] *Principles of Public Utility Depreciation* (Chicago: American Accounting Association, 1937), p. 23.

[4] R. H. Montgomery and W. A. Staub, *Auditing Principles* (New York: The Ronald Press Company, 1923), pp. 176–177.

tures on repairs are not in proportion to the production. Such a condition may indicate a poor financial status; at any rate, larger costs are incurred when it becomes necessary to make good such deferred repairs. The facts will be understood only when repairs are accounted for separately in such a way as to make possible a comparison of accrued repairs and actual expenditures on account of repairs. The third method goes far towards providing all information needed for the formulation of an intelligent policy.

The words "additions," "betterments," and "renewals" are used interchangeably; so are "maintenance," "repairs," "replacements," and "upkeep."

Any change made in plant or equipment makes it necessary to decide whether the expenditure in question benefits only the current fiscal period or future periods also. If it benefits only the current period it is a revenue expenditure and should be charged to current operations, directly or indirectly. If future periods benefit, the expenditure should be capitalized.

The Interstate Commerce Commission defines additions as "structures, facilities, and other properties added to those in service at the time of addition and not taking the place of any of like property previously held by the company."[5] Additions increase the physical dimensions of plant either in size or in productive capacity. Improvements in plant and equipment benefit future periods as well as the period in which they are made, hence they should always be charged to the proper asset account.

"Betterment" is a broader term than "additions." Any physical improvement in a property is a betterment. Betterment is defined by the Interstate Commerce Commission as "physical changes in structures, facilities, or equipment which have as their primary end or result the making of the property affected more useful, or of greater capacity than it was at the time of the installation or acquisition."[5]

These definitions may not be the last word; they are presented as merely indicating the trend of present-day thought as regards additions and betterments.

As distinguished from additions and betterments, repairs render a machine better than it was immediately before such repairs were made; yet they do not constitute a betterment, because they do not lengthen the life of the machine and do not make it essentially more serviceable. Repairs prevent the loss of service which a machine normally possesses, and result in more efficient operation, both present and future.

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[5] Quoted from J. H. Bliss, *Management Through Account*, (Ronald Press, 1924), pp. 28, 281.

INVENTORIES AND THE STATEMENT OF FUNDS

Maurice Moonitz

In the recent past, renewed interest in monetary problems, influencing both economic analysts and accountants, has been associated with increased attention to the flow of funds through business units. The statement of funds is one important tool of analysis employed to trace the flow of funds as a preliminary to assessing its significance.[1]

The need for a statement of funds arises from the fact that present-day accounting procedures are geared primarily to the determination of income and to the correlative movements in costs and values of assets and liabilities, not to the measurement of the flow of funds. To produce an analysis of funds, consequently, a device such as the statement-of-funds work sheet is required to transform income-measuring data so as to constitute a reflection of financial circulation. If a statement of cash receipts and disbursements is available, as in budgetary procedure, with receipts classified by source and disbursements by destination, no necessity exists for preparing a statement of funds from modified balance-sheet and income-statement data, because a cash statement of this nature is itself a statement of the flow of funds. In the present state of accounting development, however, a cash-receipts-and-disbursements statement, properly classified, is rarely if ever presented along with the conventional balance sheet and income statement.

In recent years technical accounting problems arising in the preparation of a statement of funds have been dealt with in a progressively satisfactory manner, but the procedures currently advocated are not yet wholly adequate. The fundamental weakness of currently accepted techniques is a lack of precision as to the exact *maximum* connotation of the term "funds." This is exemplified most vividly by the treatment of inventories and cost of goods sold. The present article is an attempt to continue further the development, on a technical accounting level, of a satisfactory procedure for preparing a statement of funds.[2]

I

In the nature of the case, a funds analysis must be concerned in some manner or other with money movements. This consideration at once sets a concrete limit to the connotation of the term "funds"; whatever its precise extent, the word must be related to financial circulation. The following excerpts are in accord with this contention.

"The source and application of funds analysis is preoccupied with a different problem from that underlying the distinction between income and capital. It is interested, whether for the purpose of studying changes in cash position or for any

[1] Among recent studies using the statement of funds are:

R. P. Mack, *The Flow of Funds and Consumer Purchasing Power* (New York, 1941).

C. L. Merwin, *Financing Small Corporations in Five Manufacturing Industries*, 1926–36 (New York, 1942).

W. C. Plummer and R. A. Young, *Sales Finance Companies and Their Credit Practices* (New York, 1940).

R. J. Saulnier, *Industrial Banking Companies and Their Credit Practices* (New York, 1940).

U. S. Congress. Temporary National Economic Committee. (Washington, D. C., 1941). *Monograph 12*, "Profits, Productive Activities and New Investment." *Monograph 15*, "Financial Characteristics of American Manufacturing Corporations."

R. A. Young and Associates, *Personal Finance Companies and Their Credit Practices* (New York, 1940).

[2] Probably the most thorough discussion available is found in W. A. Paton, *Advanced Accounting* (New York, 1941), Ch. 30. Equally good with respect to procedure but less satisfactory as to general discussion is J. N. Myer, *Financial Statement Analysis* (New York, 1941), Ch. 5.

other purpose, in the receipt and disposal of cash funds."[3]

This statement is used . . . to assemble in systematic form the essential effects and results of all transactions and operations for a given period . . . upon the primary financial sinews of the enterprise . . . "[4]

"The word *funds* is usually accepted to mean simply cash. Sometimes it is employed in a broader sense, as in the case of a sinking fund, which might include not only cash but also securities readily convertible into cash."[5]

The position taken by Paton in the following passage seems clearly unsatisfactory:

"Under a very liberal usage all financial elements, including the components of fixed investment, may be viewed as 'funds'; under a very narrow usage only actual cash resources . . . deserve to be so designated. . . . The definition adopted . . . is something of a compromise. All factors comprised in the current position of the enterprise . . . are considered as affecting 'liquid' capital or funds; and the movement—ebb and flow—of funds for a period of time, accordingly, is considered to be represented by the financial streams passing through the working-capital area."[6]

Myer adopts the same compromise. Paton, and Myer as well, develop a procedure consistent with the identity of working-capital (defined as the excess of current assets over current liabilities) and funds. They thereby submerge the primary emphasis on "financial streams." The result is a statement that accounts for variation in working capital which may be useful in its own right but not as a statement of the flow of funds. Merely calling two things by the same name does not make them equivalent.

What, then, should we employ as the accounting equivalent of "funds"? Actually, we may have a whole family of equivalents; the essential problem is one of defining the limits within which the term "funds" retains its financial essence. Clearly the minimum connotation would be cash on hand plus demand deposits. We may, however, legitimately enlarge the area by including secondary cash reserves and short-term promises to pay cash. Thus, the outer limit in a typical case might consist of the sum of cash, short-term receivables, and highly marketable securities held as a secondary cash reserve, less short-term payables. In any given situation, depending on the precise objective of the analysis, the connotation of "funds" may fall anywhere between the two limits indicated. For example, if we are studying the relative importance of bank loans in the finances of one or more enterprises, we would not merge notes payable to banks with other short-term payables, cash, and short-term receivables in a single "funds" total but would treat bank loans as the strategic source or application of funds. In no case, however, may "funds" include categories not representing cash or promises to pay cash.

As a general proposition it may be said that, in the absence of knowledge concerning the exact use to which the statement is to be put, a narrow interpretation of the term "funds" is preferable to a broad one. With "funds" confined solely to cash items, the statement attains its highest degree of flexibility, thus permitting its employment in a series of analyses each of which is directed at a different phase of enterprise operations. We may even go to the extreme of showing an increase in the cash account as an application of funds and a decrease as a source. In this connection an excessive amount of over-

[3] Mack, *op. cit.*, p. 13.

[4] Paton, *op. cit.*, p. 678.

[5] Myer, *op. cit.*, p. 67.

[6] *Op. cit.*, pp. 678 ff. Paton is singled out because of the generally high level of his analysis and his honest recognition of the compromise in which he indulges. At the opposite pole is the following befuddled passage by an author who shall be nameless: " . . . the meaning of the term 'funds,' as here used, should be explained. There is a tendency for the term to be interpreted as meaning 'cash.' In the following paragraphs it refers to resources or *wealth of any nature.* The reader should have in mind changes in any of the *working-capital assets*, rather than merely changes in the amount of cash."

elaborate detail is preferable to burying potentially useful material in broad sweeping categories. In the former case, an analyst may judiciously prune irrelevant details or ignore them; in the latter case he may be frustrated by the complete absence of vital information.

A corollary of the preceding observations is that we must not prejudge the results by a rigid pairing-off of sources and applications. For example, funds derived from sales may usually be applied to operating outlays, but not always and not necessarily. We must, consequently, be wary of categories, such as "Funds Provided by Operations," that represent the difference between a major source and a major application of funds. Accountants have the function of devising techniques for revealing important sources and applications; as analysts interested in a specific case they may pair off and combine data as the concrete circumstances dictate.

Current practice, as exemplified in statements by Paton and by Myer, conforms to the limits here set forth of the term "funds," with the single important exception of inventories. Inventories of materials and of work in process clearly do not represent portions of a stream of cash or promises to pay cash. Inventories of commodities ready for sale are soon to be converted into cash or receivables but have not yet been transferred to customers; consequently, the financial movements resulting from sales have not yet been set in motion. Far from representing funds in the sense of cash or its equivalent, inventories, together with cost of goods sold, represent, to a going concern, a most important and continuous application of funds.

II

Let us examine more closely the results obtained under current practice. Briefly, the statement of funds is derived from a comparative balance sheet, an income statement covering the interval between the two balance-sheet dates, and as much supplementary information as is available concerning the transactions engaged in by the company during the period. The changes in the balance-sheet items, reinforced by the data from the income statement, are tabulated; non-funds transactions are eliminated, and suppressed-funds transactions are restored. The adjusted changes are then classified according to their nature—either as "changes in funds" or as "causes of changes in funds." The causes are subdivided into applications and sources.

In a going concern, the typical important sources of funds are revenues from sales, short-term borrowing, long-term borrowing, issuance of capital stock, and sale of fixed assets or investments. The most important applications of funds are to wages and salaries, materials, supplies, the extinction of short-term and long-term debt, taxes, acquisition of investments and fixed assets, interest, and dividends or other proprietary withdrawals. If we ignore their treatment of short-term debts as consistent with the maximum connotation of "funds," the procedure developed by Paton and by Myer gives satisfactory results with respect to sources of funds but not with respect to their application. Cost of goods sold, originally an income-measuring category, is usually adjusted for non-funds elements, such as depreciation, and listed as an application of funds during the period under consideration. Actually, however, the transformed cost-of-goods-sold figure still includes the amount of inventory carried over from the preceding period and sold in the current period. Clearly, with respect to this item, an application of funds did not occur in the current period, but in a preceding period or periods. The duplication is compensated for by showing under working-capital changes merely the increase or decrease in the book value of

inventory between the two balance-sheet dates. Furthermore, since inventory is buried in working capital, the application of funds in the current period to unsold goods is not shown at all.

III

In a concern whose inventories are kept on a cost basis, the following entry in the adjustments-and-eliminations columns of a work sheet will remove beginning inventories from cost of goods sold and restore the ending inventory:

(a)	Beginning Inventories	xxx	
	Cost of Goods Sold		xxx

Whether cost is defined on a first-in, first-out, last-in, first-out, base-stock, or average-cost basis is immaterial; the total outlays in the current period on goods acquired for sale to customers will appear either in ending inventory or in cost of goods sold.[7] If, however, inventories are reported on some basis other than cost (for example, cost or market, or sales price less selling costs) an added adjustment of ending inventory is required to eliminate the non-funds element in a manner similar to that employed for canceling appraisal changes in fixed assets.

In all types of concerns in which inventories are of importance, a further problem may be posed by an average period of process and turnover that is longer than the accounting period. This leads to the presence in ending inventory of units also included in beginning inventory. In the case of a manufacturing concern, the treatment of cost of goods sold and ending inventory is further complicated by the existence of depreciation and other non-funds costs charged to process.

[7] This statement is strictly true only if all beginning inventory has been sold in the current period; otherwise a further adjustment along the lines indicated below is required.

When the period of process is long relative to the accounting period so that some materials, work in process, or finished goods on hand at the beginning of the period are still unsold, the actual or estimated intra-inventory transfers are dealt with as non-funds items. For example, if we assume that all finished goods at the beginning of the period have been sold but that $10,000 of the beginning inventory of materials is still present in work in process, and $15,000 of the earlier work in process is now in finished goods, the following entry is in order:

(b)	Cost of Goods Sold	$25,000	
	Work in Process (ending inventory)		$10,000
	Finished Goods (ending inventory)		15,000

The credits to work in process and finished goods are clearly necessary to adjust ending inventories so that they reflect applications of funds solely in the period under consideration. The debit to cost of goods sold is to compensate for the over-elimination now seen to have resulted from adjustment (a) above. As a matter of procedure, as opposed to a choice of sequence in exposition, adjustments (a) and (b) should be combined into a single cancellation.

Given the amount of depreciation and other non-funds items currently charged to work in process, finished goods, and cost of goods sold, we neutralize their effect by the following entry:

(c)	Allowance for Depreciation	xxx	
	Prepaid Rents, Royalties, etc.	xxx	
	Work in Process (ending inventory)		xxx
	Finished Goods (ending inventory)		xxx
	Cost of Goods Sold		xxx

After making those of the preceding adjustments that are appropriate to a specific situation, we extend cost of goods sold and

ending inventory, both freed of any trace of prior years' operations, as applications of funds, thereby indicating the amount of cash currently paid out or promised in connection with each category.

With sufficiently detailed operating statistics available we may obviate most of these adjustments by canceling all inventory and cost-of-goods-sold elements, and substituting the figures for actual current outlays on wages, materials, supplies, and the like. If data of this nature are available, however, by preparing a statement of sources and applications of funds directly from the budgetary materials, we may usually avoid the awkward procedure inherent in adjusting income-measuring magnitudes.

ECONOMIC OBSOLESCENCE OF LAND*

CHARLES T. BLACKMORE

In the opinion of the author, land value as such is not a permanent and stable thing and, in the case of investment-type properties, substantial losses are often the result of economic obsolescence in land. A reserve for normal depreciation on the improvements alone is not enough; there is need also for an adequate reserve from the earnings of the property during its estimated life of productivity to recapture not only the investment in improvements, but also a part of the investment in land.

Those consulted who have long specialized in the study of real estate agree that the value of real estate is created by economic and social forces; and, like the value of all other things, it arises solely from human needs and human attributes. Land value is the result of anticipated land returns; and if land is not used, generally speaking, no actual value is being created and no real land value exists. It may be well to associate with this characteristic the fact that it is costly to hold land without committing it to use. Economic obsolescence as used herein, therefore, reflects loss in value brought about by external economic forces.

Until some fifteen years ago, economic obsolescence of land was more or less an academic question. Our centers of population were growing rapidly. Many people were leaving the farms to go to the cities, and hundreds of thousands of immigrants were taking their places on the farms. Large families were commonplace. Real estate seemed to increase in value regardless of its location. However, in recent years our rate of population growth has been steadily declining. We have gradually become conscious of depreciating forces at work which were seriously affecting many of our large urban centers. Not only have we experienced decentralization of population, but also a decentralization of business and industry. Technological changes—particularly, the automobile and other improved modes of transportation—have brought about rapid shifts in population and, as a result, many neighborhood changes. These conditions, together with changes in the mode of merchandising, have had a serious effect on our urban business centers and have brought about substantial losses to investors. In Chicago, for instance, during the past ten years literally thousands of parcels of property have been forfeited for

* Acknowledgment is made of the collaboration of Mr. Albert C. Svoboda, Certified Appraiser, who has for many years specialized in the appraisal of investment-type properties.

nonpayment of taxes. We have, therefore, come to realize that land is valuable only if it is productive and that this land value is not a stable and permanent thing.

Under present accounting procedure and practice there is provided out of income a reserve for recapture of the investment (depreciation). But it applies only to the improvements under the assumption that land itself does not depreciate. This is true so far as the physical properties of the land itself are concerned but not true with respect to its market value or its useful or utility values.

It is assumed that when a building has finished its usefulness and has been fully depreciated it is removed and the land is again ready for development. At this point we should take inventory of neighborhood values and trends. We may find, for example, that the neighborhood is very old, i.e., adjoining and surrounding buildings are old and the type of occupancy has reached a low level. The area can no longer attract the type of tenants who could afford to pay a rental commensurate with requirements to produce a fair return if a new building were constructed on the site.

Improvements constructed on a land site decline in value through use and occupancy, advancing age, obsolescence in appointments, aging neighborhood, change in type of occupancy, and decline of income productivity.

Land value does not necessarily decline as a result of advancing age But combined with improvements and not necessarily individually, it does decline through changes in a neighborhood as a result of age of the neighborhood, through changes in occupancy of the improvements and surrounding improvements, and through decline in income productivity and utility.

Since the economic collapse of 1929 and 1930, we have seen land values steadily decline. Prior to 1929, land values were steadily increasing and neighborhoods were being built up to a point of overexpansion and congestion. The typical neighborhood of thirty years ago in most of our cities is now definitely on a down trend. The present newer and fully developed neighborhood upon becoming old thirty or forty years hence will undoubtedly have deteriorated through age, obsolescence, different type of resident, and aging business facilities, all of which will tend to lower land values materially.

The following is an example of a sale recently consummated for $350,000. The property is located in an active outlying neighborhood which at the present time appears to be reasonably stable. It consists of a parcel of land improved with a two-story building housing various store and office tenants. There are no long-term leases. The property was appraised at $350,000, of which $50,000 represents the value in improvements (building) and $300,000 represents the value in land.

In his report the appraiser, who has long specialized in the study of investment-type properties, set forth his economic analysis of this property as follows:

Net annual income before depreciation.....	$23,895
Less annual deposits to a sinking fund compounded at 3% annually to retire $175,000 of the invested capital in 35 years (.01654 ×$175,000)...........................	2,895
Net to interest on invested capital which if capitalized at 6% reflects a value in land and building of $350,000...............	$21,000

The appraiser stated in his report that because of the hazards involved in investment-type properties a prudent, well-informed investor would not only expect to retire the capital invested in the improvements by the end of the estimated remaining life of thirty-five years, but also to recapture a part of the investment in land.

Here the appraiser set forth the following facts: that the building is worth

50,000; that the land at the end of thirty-five years will have declined to a value of $175,000, since in his appraisal he provides for recapture of investment out of income an amount of $50,000 for improvements and $125,000 for land over the estimated remaining life of the improvement, namely thirty-five years.

Since accountants advocate conservatism (anticipate no profits and provide for all possible losses) why not make some provision for loss in land values which experience shows has happened and is still happening in numerous cases?

In another instance, in 1928 a parcel of property was sold, the improvements on which consisted of a four-story walk-up type apartment building containing fifty-four apartments. The sale price was $152,000 and the appraised values were given as land, $120,000 and building, $32,000. The value given the building indicated that it was very old at this time, but evidently land values had held up rather well. There was negotiated at that time a loan of $75,000 secured by the property, both parties and appraisers agreeing to the above values. Ten years later it was necessary to foreclose and new appraisals were made. The values given at this time were land, $37,000, and building, $30,000—a total value of $67,000. It is to be noted that the structure did not materially decline in value but rather enhanced after allowing for depreciation. The chief point in this example, however, is the fact that land values declined $83,000.

Literally hundreds of cases exist in almost all localities in cities where the same situation has prevailed, which probably includes a majority of large cities in this country.

One point that may well be emphasized is the fact that during the income or earning period of the property, no cognizance is given to the loss factor in the land values. The investor is thus confronted with the possible loss in land value (at disposition) at a time when there is no income to absorb any loss. As illustrated in the case above, the earnings are not due only to the productivity of the building; the greater portion of the earnings was due to the economic productivity of the land. In other words, the earnings were the result of economic productivity of both land and building as a combined unit. Therefore these facilities should be amortized against the earnings during their economic life and productivity, rather than at a time when nothing is left to the investor but a loss without income to absorb the loss. On the other hand, if a gain should result through this procedure, it should be held to be a taxable gain. It is understood that the gain or loss would result only through disposition of the facilities.

The foregoing might well be adapted to both prewar and wartime facilities or plants which are held as privately owned properties. Therefore it seems reasonable and timely to consider a possible provision out of income for loss in land values. It is the opinion of the author that consideration should be given to this condition both by accountants and by the Bureau of Internal Revenue.

THE ACCOUNTING EXCHANGE

A. C. LITTLETON

When men with many interests in common are thrown together, they find innumerable topics to talk about with pleasure and benefit. It can be the same with writing; topics to write about are innumerable in a field of common interests. Accounting is such a field, and, like other fields of knowledge and of work, it stands to benefit from a continuing exchange of views.

The range of the exchange need not be confined to the results of extensive research, or to the analysis and reporting of complex experience. Exchange of opinions can also make a contribution. What one thinks at the moment need not commit him irrevocably to a certain position; nor is his idea necessarily put forward with the purpose of securing converts to the view presented.

As an example, there must be many people interested in accounting who have opinions about the attributes of a profession, with special reference to those that are appropriate for accounting. If these were made known we could all benefit from a better perspective regarding our work as teachers and as practitioners.

A good perspective on professional attributes would be helpful, for example, whenever the problem to be faced had to do with setting and maintaining standards of admission to the profession and standards of professional practice after admission. Good perspective would also be useful whenever organization activities or educational programs are under consideration. When and if the profession might be under fire of criticism, perspective would be indispensable.

One of the ways of gaining the necessary perspective about one's profession is to read what others think about the ideals, objectives, limitations, duties, and responsibilities that are inherent in that profession. One of the ways of providing such perspective is for those who have ideas about attributes to write them out for others to read.

ATTRIBUTES OF A PROFESSION. As an excitant—and inspiration—it would be difficult to find anything better than the following excerpt (*The Engineering Journal*, March, 1941) from an address before the Engineering Institute of Canada by William E. Wickenden, president of Case School of Applied Science:

All authorities recognize that some of the distinguishing attributes of a profession pertain to individuals, while others pertain to groups, but there is considerable variation in the emphasis given. Let us glance briefly at these two sorts of distinguishing attributes.

What marks off the life of an individual as professional? First, I think we may say that it is a *type of activity* which is marked by *high individual responsibility* and which deals with problems on a *distinctly intellectual plane*. Second, we may say that it is a *motive of service, as distinct from profit*. Third is the *motive of self-expression*, which implies a joy and pride in one's work and a *self-imposed standard* of workmanship—one's best. And fourth is a *conscious recognition of social duty* to be accomplished, among other means, by guarding the standards and ideals of one's profession and advancing it in public understanding and esteem, by sharing advances in professional knowledge, and by rendering gratuitous public service, in addition to that for ordinary compensation, as a return to society for special advantages of education and status.

Next, what are the attributes of a group of persons which mark off their *corporate* life as professional in character? I think we may place first a *body of knowledge* (science) *and of art* (skill), held as a common possession and to be extended by united effort. Next we may place *an educational process* of distinctive aims and standards, in ordering which the professional group has a recognized responsibility. Third in order is a *standard of qualifications*, based on character, training, and competency, for admission to the professional group. Next follows a *standard of conduct* based on courtesy, honor, and ethics, to

guide the practitioner in his relations with clients, colleagues, and the public. Fifth, I should place a more or less formal *recognition of status* by one's colleagues or by the state, as a basis of good standing. And finally *an organization* of the professional group based on common interest and social duty, rather than economic monopoly.

Can this outline be applied to accounting as well as to engineering? Is there nothing to be added or deducted because of the particular responsibilities or limitations that attach to accounting? Would accounting education or accounting practice benefit from an explanation or elaboration of one or more of the specific attributes here outlined? Is such attribute as fully recognized in accounting as might be desirable? For example, are we teaching students "a conscious recognition of social duty," as well as a technical proficiency within the profession of accounting? Do men enter the profession fully aware that public welfare and not their own progress as individuals is the basis of their profession? Does the public realize that its welfare is touched by professional accounting? Are experienced practitioners in sufficient numbers "sharing advances in professional knowledge"?

We could exchange ideas on professional responsibilities and on advances in professional knowledge, without seriously influencing the paper shortage.

EDUCATIONAL COMPROMISE. During the last five years, committees of the American Institute of Accountants, of the American Association of Collegiate Schools of Business, and of the American Accounting Association have expressed a preference for a middle-ground type of program of college education for a career in accountancy.

The consensus might have favored one of two extreme programs: (1) a broad and liberal education about life and leadership which, in addition to other results, would give the student some knowledge of man and nature, some acquaintance with the world's great problems and great ideas and some appreciation of truth and beauty—a program which would include little direct preparation for earning a living; or (2) an intensive education along thoroughly practical lines, which would concentrate heavily, perhaps entirely, upon accounting as a way of earning a living, and probably would link spare-time study with regular full-time employment.

The fact that neither extreme program was favored by the committees does not indicate a belief that there is any particular virtue in compromise for its own sake. A program that involved four years of liberal education, plus three years of technical accounting education, plus three more years of practical experience (as if an internship) would probably be considered an ideal capable of influencing development in the right direction even if small hope could be held out for its full achievement. A middle ground would not necessarily be exactly in the middle. It would be chosen on the basis that it went as far above the minimum program as possible rather than on the basis that it approximated the ideal as closely as possible.

The standard usually set up for the compromise program is four years of college work equally divided in amount between technical courses in accounting and closely allied subjects such as law, finance, business administration and the like, and general education which would include certain tool subjects such as rhetoric and mathematics, certain informational subjects such as the sciences, and certain citizenship subjects such as the social sciences.

If a typical college program consists of 120 semester hours, or approximately 40 separate courses, and if the field of specialization occupies 60 hours or 20 courses, one of the problems that face college authorities in building curriculums and in advising students as to electives is how to compress a liberal education into 60 semester hours or how to select the 20 best

courses for the purpose from the vast number available in natural sciences, social sciences, humanities, and fine arts.

Less attention has been given to these matters in the past than to the technical portion of the professional education. The objectives of the latter are well understood. The committee on education of the American Institute of Accountants pointed out in 1935 that technical education should provide the student with understanding of the content, scope, philosophy, and ethics of this field and equip him with knowledge of the tools, terminology, and methods necessary to the practice of the profession. It would be clearly beneficial if a similarly pertinent statement were to be formulated somewhere regarding the objectives of the general portion of professional education.

The time is ripe to think and write of these things—educational activities are now at low ebb. The principle of the natural business year comes into play here too. It would be better not to wait until peace comes and the necessity is upon us to decide upon the alternatives of taking up just where we left off or of instituting changes that would improve professional education and accommodate it to new conditions.

THE SOCIAL SCIENCES. Every field of education has its reasons for being. It would be helpful to accounting teachers to know what some of these are. In what ways are mathematics and rhetoric "tool subjects"? How do the fine arts make life more endurable? Can the humanities give understanding of the progress of civilization? Will acquaintance with the natural sciences be useful to people who will not be working in contact with any one of the sciences?

Similar questions arise about the field of the social sciences. The field may be considered to include economics, history, political science, psychology, philosophy and sociology. How should some portion of the assigned space of 20 courses be apportioned among these departments in an accounting educational program? Perhaps some one may wish to defend the above sequence as a helpful indication of priority of preference—or condemn it, or propose another.

It would not be a satisfactory answer to the educational problem here raised to say that every school constitutes a unique situation. So is every audit a unique situation. But there are alternatives to choose from and there are reasons for the procedures followed. Dead uniformity is as paralyzing in education as in auditing, and complete individuality would be unfortunate in both cases.

It ought to be possible to analyze educational objectives objectively without committing any one as a rigid advocate of some existing pattern or of a plan offered for scrutiny. Preferences suggested, with the reasons given, should not prove disturbing to any department mentioned, because nothing approaching a major could be recommended in any of the social sciences.

ECONOMICS. There is a further problem beyond choosing among departments—that is, choosing courses within a department. It should not be a difficult topic to approach since every teacher is frequently adviser to many students in the choice of courses. In discussing his ideas on the matter a writer would work under unusually easy conditions, because specific requirements for graduation would not need to enter the picture.

Take economics as an example. What courses would be the most advisable for the accounting major in view of the limited time available to him and the objectives of the general education portion of his program?

The following listing may be used to afford a concrete point of departure arranged to start discussion.

To be included in the program by rule:

Principles of Economics
Economic History of the United States
Money and Banking
Corporation Finance

To be recommended for electives:

A. Business Economics

Investment Analysis
Banking Practices
Property and Life Insurance
Foreign Exchanges
Personnel Administration
Economic Statistics

B. Social Economics

Public Finance
Advanced Economic Theory
Labor Economics
Public Utility Economics
Economics of Foreign Trade

Some of the problems suggested by this outline would involve the selection of courses to be prescribed for all taking the accounting program, the apportionment of the recommended electives as between business economics and social economics (if there is to be a distinction), and the sequence of preference for courses within each list. No doubt other issues of interest will occur to many readers, and similar outlines for other departments in the social sciences could be constructed for discussion.

Aptitudes. Scattered along the avenues of entrance into professional public accounting are a number of hurdles which test the aspirant's fitness to serve the public in that capacity. This is so, not because a spirit of monopolistic exclusiveness actuates men already in public practice, but because the longer that public practice exists, the greater becomes the conviction that public interest requires ever higher qualifications in accounting practitioners. Hence the hurdles along the way.

One of the most important qualifications for public practice is aptitude. Yet very little is known about the content of the term. Is it not time that some study be given to the questions of what aptitudes to look for, how to recognize signs of latent aptitude, how to distinguish real from pseudo-aptitudes?

Teachers would like to know some of the answers so that they can advise students as the opportunity arises. They can hardly deny graduation to a man who demonstrates knowledge and understanding because they think some personal trait indicates lack of aptitude. But they could advise him. Practitioners would like to lay hold of some indicators of aptitude so that they could recruit new members of their staffs more confidently. Those who aspire to the profession, perhaps more than any others, would like to learn something about their own aptitudes.

Readers with ideas about aptitudes might like to experiment in putting them on paper. Those who have had experiences that seemed to reveal clues to aptitudes could make a contribution by describing them.

One of the hurdles along the road is a college education. It is of interest to note that this particular hurdle has appeared naturally and with little or no legislative pressure. Only one state now requires graduation from college for admission to the CPA examination. Yet in a recent period of seven months almost three-fourths of 466 new members and associates admitted to the American Institute of Accountants were college graduates. This hurdle is principally a test of survival, of capacity for intellectual growth, of ability to learn. The CPA examination, on the other hand, is designed to sample the content of the candidate's technical knowledge, however that knowledge may have been acquired.

Practical experience is another hurdle. This one is deliberately placed in the path, but the reason is not the one usually presumed. It is not because working experi-

ence is now considered a preferred way of gaining knowledge, but because the public interest requires that the public practitioner have more than knowledge. This hurdle subjects the aspirant to a test of ability to work with people and under direction, of ability to orient his knowledge effectively to a situation at hand, of ability to learn from observation without getting lost in the deep forest of a multitude of facts.

None of these tests would be adequate alone. Together they are reassuring; but they are not final. A man may be a college graduate and a CPA of considerable experience, and still be unsuited in temperament, personality, and other qualities for public practice—that is, a man with good training, but without aptitude. All along the road there is need for some kind of practical, dependable aptitude tests.

Could tests be devised that might help a man to decide whether he could probably benefit in college from a study of more than the usual introductory course in general accounting, that might help him to decide at the end of his college work whether he should prepare for the CPA examination, that might help employers to decide whether to provide the individual with the needed experience and guidance in furtherance of his preparation for serving the public as a professional accountant? If such tests could be constructed, they would be useful in many ways. If aptitude tests can be devised to help distinguish a man who is best qualified to become a pilot of an airplane from one best qualified to become an air navigator, surely tests could be constructed that would detect latent capability suitable for the work of a public accountant.

Professional men probably "know what they like" in the way that many people react to music. But it would help all concerned if they could more closely identify the desired qualities. It would be even more helpful if teachers and practitioners, with the aid of experienced psychologists, could produce a method of identifying certain personal qualities in objective ways, so that college records of classroom results could be supplemented with additional, although not as part of graduating requirements, and so that personnel records in accountants' offices might contain data beyond the vital statistics of the individual, a transcript of his college record, and the vague impressions of personality that come out of an interview.

A number of tests could perhaps be devised and tried on experienced accountants in an experimental way. Those tests that seemed most revealing could then be subjected to further observation by using them experimentally with young men recently accepted for professional work and still under training and scrutiny, and by using them experimentally upon college students who wish to major in accountancy and may later be further observed in class and office.

On the other hand, it may be impossible to obtain any agreement as to the aptitudes desired. Elaborate tests would hardly be warranted if the qualifications were simply to be "good at figures," or if the employer were content with his own appraisal of an applicant's personality, once he knew his scholastic rating in college. Or it may be impossible to detect by psychological tests the aptitudes which underlie the capacity to grow professionally.

But if it could be done! If we could learn enough about aptitudes, is it not very probable that we could learn how aptitudes could be improved by teaching and training? Or is aptitude something that can not be changed by any means? Many people would like to know.

PROFESSIONAL EXAMINATION

A Department for Students of Accounting

HENRY T. CHAMBERLAIN

THE FOLLOWING problems are the first half of the May, 1943 C.P.A. examination in accounting practice prepared by the Board of Examiners of the American Institute of Accountants. The examinee was given four and one-half hours to solve all problems. The problems were weighted as follows: problem 1, 10 points; problem 2, 20 points; problem 3, 20 points.

A suggested time schedule is given below:

Problem 1	40 minutes
Problem 2	120 minutes
Problem 3	90 minutes

No. 1

On January 1, 1943, the Black Corporation sold its 6,000 shares authorized stock of $100 par value for $600,000 cash. On the same date the corporation acquired the following assets for cash:

Land	$ 50,000
Buildings	250,000
Machinery and equipment	150,000
Raw material inventory	100,000
	$550,000

The land, buildings, machinery and equipment were correctly valued. The raw material is a patented fabric which the corporation is contractually obligated to buy from the manufacturers at a fixed price as long as it continues to operate. In consideration of assuming this obligation a one-time concession of 50% was made in the price of the opening inventory so that the corporation received in effect $200,000 worth of raw materials for $100,000. The inventory acquired represents a minimum below which the stock of raw material is not supposed to go.

At the end of the first quarter the following balance-sheet was prepared from the books:

Assets	
Cash	$ 20,000
Accounts receivable, less reserve	30,000
Raw materials, at contract price	205,000
Plant and equipment, less depreciation	440,000
	$695,000
Liabilities and Capital	
Liabilities	$ none
Capital stock	600,000
Earned surplus	95,000
	$695,000

What adjustments should be made to the latter balance-sheet and to what extent does it call for modification of the auditor's short-form report? Give at least two reasonable solutions.

Taxes need not be considered and it is assumed that all audit requirements were satisfactorily met.

No. 2

Among the wholly owned subsidiaries of a holding company are the Service Company and the Operating Company.

The Service Company undertakes the construction and maintenance work of the various other constituents and charges them cost plus 10%.

The Operating Company's books show a balance of $553,879.59 in property account, in substance made up as follows:

1933	Original plant	$385,462.55
1935	Extension	138,875.44
1940	Replacements	29,541.60
		$553,879.59

In 1940 part of the original plant, costing $25,248.30 had been retired, but plant account was not adjusted. Salvage of $2,525.00 was collected and credited to

1940 income. The retired plant was immediately replaced at the above-stated cost of $29,541.60.

The plant has an estimated useful life of 20 years and after 1953 will be held in its entirety as stand-by equipment. It was estimated that the original plant would then have a salvage value of $20,000, which estimate, on account of the 1935 extension, was increased to $25,000. After 1953 it will be permanently carried at the latter amount.

On December 31, 1942, the reserve for depreciation was $225,018.71 of which $27,693.98 had been provided in 1942, namely 5% of the balance of $553,879.59 in property account.

Maintenance charges of $22,440 had been made by the Service Company in 1942 and $163,900 in previous years.

Prepare:

1. A summary of the Operating Company's adjusted property account and reserve for depreciation.
2. The entries for any adjustment of the two companies' balance-sheets prior to their consolidation with the holding company's and other subsidiaries' accounts.

No. 3

The books of a certain city show that revenue has exceeded expense. Nevertheless there are not enough funds available to pay its bills.

From the following closing trial balance and additional information procured, prepare:

(a) A balance-sheet in the proper form.

(b) A columnar work sheet showing how the books had to be adjusted.

(c) Comments upon the adequacy of the accounting system indicating in what respects it fails to comply with accepted methods.

TRIAL BALANCE

	Debits	*Credits*
Cash	$ 3,460	$
Accounts receivable	2,420	
Taxes receivable, current year's levy	21,400	
Tax anticipation notes payable		15,000
Accounts payable		22,600
Expense	152,500	
Revenue		155,600
City property	2,164,000	
Bonds payable		320,000
Surplus, beginning of year		1,830,580
	$2,343,780	$2,343,780

ADDITIONAL INFORMATION

(1) Equipment was purchased during year, debited to City Property account, $12,600; and credited to Cash.

(2) Total tax levy, $121,500, all of which was credited to Revenue. Records of previous years indicate an average loss of 6% in collection.

(3) Bonds paid during year, $20,000, the entry being a debit to Bonds Payable and credit to Cash. No bonds were issued during the year.

(4) During the year the City Council authorized a central storeroom with an inventory not to exceed $10,000. Purchases amounting to $9,150 were made and charged to Expense. Stores issued to departments amounted to $4,625 for which no entry was made.

(5) The sum of $3,200 is due from the state on the city's share of gasoline taxes, to apply on expenditures already made for street repairs.

(6) The tax levy includes a special levy for the city library, $4,200, of which $3,600 has been collected and $3,125 paid out and charged to Expense.

(7) At the close of the year there were orders and contracts outstanding to the amount of $2,180.

(8) Included in items charged to Expense are bills of $1,869 on account of previous year.

(9) Also included is a petty cash advance of $300.

(10) Equipment costing $6,800 was removed from service during the year.

Solution to Problem 1

It is obvious that the reported earned surplus arose as a result of charging the opening inventory to cost of sales at the reduced price or by a write-up of the inventory to the contract price. While the original investment in inventory, $100,000.00, did represent the cost of those goods this special price was given because of other considerations, and good reporting would require disclosure of the special conditions surrounding this transaction. Three possible solutions are presented below:

SOLUTION 1

If the last-in-first-out method is adopted, the adjustment would be:

Earned surplus.........	$100,000.00	
Raw materials.....................		$100,000.00

If this method of inventory valuation is adopted, the inventory should be described on the balance sheet as follows:

Raw materials, at cost determined on the basis of last-in-first-out.............	$105,000.00

The balance sheet should carry a footnote reciting the fact that the company is contractually obligated to buy its raw materials from one supplier at a fixed price and that the inventory on the last-in-first-out basis must be maintained at an amount not less than $100,000.00. Further, the footnote might indicate that the adjusted inventory on the last-in-first-out basis is stated at a value substantially less than market.

SOLUTION 2

If the first-in-first-out method is adopted the adjustment would be:

Earned surplus.........	$100,000.00	
Capital surplus arising as a result of contractual obligations............		$100,000.00

The balance sheet should carry a footnote keyed to the capital surplus item reciting the fact that the company is contractually obligated to buy its raw material from one source at a fixed price and that the inventory must be maintained at an amount not less than $200,000.00. Further this note should explain that the capital surplus arose as a result of this contract by which the Black Corporation acquired its original inventory at a special price.

SOLUTION 3

If the earned surplus arose through operations rather than through a write-up of the inventory and if the balance sheet is not adjusted the auditor's short form report should make a clear statement of how the earned surplus arose. In this statement he should point out that the earned surplus results from a special price given to the Black Corporation by its supplier and was not the result of normal business operations. Further, the contractual obligation of the Black Corporation should be clearly disclosed either in the short form report or by means of a footnote to the financial statements.

Solution to Problem 2

(1)

Operating Company
Summary of Adjusted Property Account and Reserve for Depreciation
1933 to 1942

	Life	Asset	Estimated Salvage	Amount Subject to Depreciation	Reserve for Depreciation	Depreciation Charges: 1934 and 1935	Depreciation Charges: 1936 to 1940 inc.	Depreciation Charges: 1941	Depreciation Charges: 1942
1933 Original plant	20	$385,462.55	$20,000.00	$365,462.55	$127,911.91	$36,546.26	$91,365.65		
1935 Extension	18	138,875.44	5,000.00	133,875.44	37,187.60		37,187.60		
		$524,337.99			$165,099.51				
1940 Retirements		25,248.30			22,723.30				
		$499,089.69			$142,376.21				
Replacements		29,541.60							
Balance of asset account		$528,631.29	$25,000.00	$503,631.29					
Less reserve for depreciation				142,376.21					
Subject to depreciation	13			$361,255.08	55,577.70			$27,788.85	$27,788.85
					$197,953.91				

Reconciliation

Cost of original plant	$385,462.55
Cost of extension	138,875.44
Cost of replacements	29,541.60
	$553,879.59
Less: Estimated salvage value in 1953	$ 25,000.00
Salvage realized	2,525.00
	$ 27,525.00
Amount to be amortized	$526,354.59

Depreciation charges through 1942:	
1934 and 1935	$ 36,546.26
1936 to 1940 inc.	128,553.25
1941	27,788.85
1942	27,788.85
Depreciation charges for remaining life (11×$27,788.85)	305,677.35
	$526,354.56

(2)

The following entry should be made to correct the Operating Company's Accounts:

(1) Net income, 1942	$ 94.87	
(2) Reserve for depreciation	27,064.80	
(3) Property account		$25,248.30
(4) Earned surplus (through P & L)		1,911.37

Explanation

(1) Correct depreciation charge, 1942	27,788.85
Depreciation charge, 1942, per books	27,693.98
	$ 94.87
(2) Reserve for depreciation, per books	$225,018.71
Reserve for depreciation as adjusted	197,953.91
	$ 27,064.80
(3) To relieve account of asset replaced	
(4) Depreciation charges through 1941, per books	$197,324.73
Depreciation charges through 1941, as corrected	192,888.36
	$ 4,436.37
Less salvage incorrectly credited to income	2,525.00
	$ 1,911.37

Schedule of Realized and Unrealized Profit on Inter-Company Transactions

1933	Asset Amount	Unrealized Profit (1/11)	Profit Realized	Portion Realized
Original plant	$385,462.55	$35,042.00	$	
Less retirement	25,248.30	2,295.30	2,295.30	100%
Balance	$360,214.25	$32,746.70	14,736.02	9/20
1935—Extension	138,875.44	12,625.04	4,909.73	7/18
1940—Replacements	29,541.60	2,685.60	413.16	2/13
	$528,631.29	$48,057.34	$22,354.21	

Realized in 1942:	
1/9 of $14,736.02	$ 1,637.34
1/7 of 4,909.73	701.39
1/2 of 413.16	206.58
	$ 2,545.31
Realized prior to January 1, 1942	$19,808.90

If a consolidated balance sheet is to be prepared, the following entries should be made:

(1)

		Debit	Credit
	Surplus, January 1, 1942—Service Company	$48,057.34	
	Property account—Operating Company		$48,057.34
	To restore property account to cost		

(2)

		Debit	Credit
(1)	Reserve for depreciation—Operating Company	$20,058.91	
(2)	Surplus, Jan. 1, 1942—Service Company		$17,513.60
(2)	Net income, 1942—Service Company		2,545.31
(1)	To adjust reserve for depreciation for intercompany profit included therein:		
	Total realized inter-company profit	$22,354.21	
	Less realized profit on assets retired and not included in the reserve	2,295.30	
		$20,058.91	
(2)	Reserve adjustment as above	$20,058.91	
	Realized profit in 1942 (credit net income)	2,545.31	
	Realized profit prior to 1942 (credit to surplus)	$17,513.60	

Solution to Problem 3

(a)

A Certain City
Working Papers Showing Adjustments of Accounts
Year ended (Date)

	Trial balance (per books)		Adjustments		Current fund		Property fund		Stores stock fund		Trust Fund	
Cash	$ 3,460	$	$	(4b) $ 850	$ 2,135	$	$	$	$	$	$	$
				(6a) 475								
Accounts receivable	2,420		(9) 300		2,720							
Taxes receivable, current year's levy	21,400			(6a) 600	20,800							
Tax anticipation notes payable		15,000				15,000						
Accounts payable		22,600				22,600						
Expense	152,500		(1) 12,600	(4b) 4,525								
			(3) 20,000	(6a) 3,125								
			(7) 2,180	(8) 1,869								
				(9) 300								
				(12) 177,461								
Revenue		155,600	(2) 7,038	(5) 3,200								
			(6a) 4,200									
			(12) 147,562									
City property	2,164,000			(10) 6,800			2,157,200					
Bonds payable		320,000						320,000				
Surplus		1,830,580	(4a) 10,000		22,588							
			(8) 1,869									
			(11) 1,811,400									
			(12) 29,899									
Surplus invested in fixed property:												
Balance, beginning of year				(11) 1,811,400								
Purchase of equipment				(1) 12,600				1,837,200				
Retirement of bonds				(3) 20,000								
Retirement of property			(10) 6,800									
Advance to stores stock fund			(4b) 10,000		$10,000							
Reserve for stores				(4a) 10,000		10,000						
Inventory			(4c) 4,525						4,525			
Due from current fund			(4c) 4,625						4,625			
Due to stores stock fund				(4b) 4,625		4,625						
Due from state government			(5) 3,200		3,200							
Reserve for orders and contracts				(7) 2,180		2,180						
Reserve for uncollectible taxes				(2) 7,038		7,038						
Stores stock fund balance				(4c) 10,000						10,000		
Cash—stores stock fund			(4c) 850						850			
Cash—trust fund			(6b) 475								475	
Taxes receivable—trust fund			(6b) 600								600	
Trust fund balance				(6b) 1,075								1,075
	$2,343,780	$2,343,780	$2,078,123	$2,078,123	$61,443	$61,443	$2,157,200	$2,157,200	$10,000	$10,000	$1,075	$1,075

KEY TO ADJUSTMENT

1. To credit current year's purchase of equipment to property fund.
2. To set up reserve for uncollectible taxes.
3. To credit bonds retired to property fund.
4a. To set up reserve for stores.
4b. To set up advance to store stock fund.
4c. To show establishment of stores stock fund.
5. To set up amount due from state.
6a. To correct current fund accounts for trust fund taxes.
6b. To set up trust fund.
7. To set up liability for orders and contracts.
8. To charge bills of prior years to surplus.
9. To correct charge for petty cash advance.
10. To record retirement of property.
11. To set up surplus of property fund at beginning of year.
12. To close revenue and expense to surplus.

(b)

A Certain City
Fund Balance Sheets
(Date)

CURRENT FUND

Assets			*Liabilities*			
Cash		$ 2,135.00	Accounts payable			$ 22,600.00
Accounts receivable		2,720.00	Tax anticipation notes payable			15,000.00
Taxes receivable, current year's levy	$20,800.00		Reserve for orders and contracts			2,180.00
Less reserve for uncollectible taxes	7,038.00	13,762.00	Due to stores stock fund			4,625.00
			Reserve for stores			10,000.00
Due from state government		3,200.00	Surplus:			
Advance to stores stock fund		10,000.00	Balance at beginning of year		$ 19,180.00	
			Deduct:			
			Correction of prior year's expense	$ 1,869.00		
			Reserve for stores	10,000.00		
			Excess of expense over revenue	29,899.00	41,768.00	
			Balance (Deficit) at end of year			* 22,588.00
Total		$ 31,817.00	Total			$ 31,817.00

PROPERTY FUND

City property	$2,157,200.00	Bonds payable		$ 320,000.00
		Surplus invested in fixed property:		
		Balance at beginning of year	$1,811,400.00	
		Equipment purchased during year	12,600.00	
		Bonds retired during year	20,000.00	
			$1,844,000.00	
		Less equipment retired during year	6,800.00	
		Balance at end of year		1,837,200.00
Total	$2,157,200.00	Total		$2,157,200.00

STORES STOCK FUND

Cash	$ 850.00	Stores stock fund balance	$ 10,000.00
Inventory	4,525.00		
Due from Current fund	4,625.00		
Total	$ 10,000.00	Total	$ 10,000.00

TRUST FUND

Cash	$ 475.00	Trust fund balance	$ 1,075.00
Taxes receivable	600.00		
Total	$ 1,075.00	Total	$ 1,075.00

(c) Comments upon the adequacy of the accounting system:

The city has made no segregation of the assets, liabilities and surplus by funds. This has resulted in a number of misstatements of revenue and expense which accounts for the fact that while the books show an apparent excess of revenue over expense of $3,100.00, there was actually an excess of expense over revenue of $29,899.00.

Following is a summary of the changes in the revenue and expense accounts:

Expense (per trial balance)			$152,500.00
Deduct:			
Stores inventory		$ 4,525.00	
Payment of taxes collected for trust fund		3,125.00	
Expenses of prior year		1,869.00	
Petty cash advance		300.00	9,819.00
			$142,681.00
Add:			
Additional property		$ 12,600.00	
Redemption of bonds		20,000.00	
Orders and contracts not recorded		2,180.00	34,780.00
Expense as corrected			$177,461.00
Revenue (per trial balance)		$155,600.00	
Add amount due from state government		3,200.00	
		$158,800.00	
Deduct:			
Provision for uncollectible taxes	$7,038.00		
Taxes levied for trust fund	4,200.00	11,238.00	
Revenue as corrected			147,562.00
Excess of expense over revenue			$ 29,899.00

BOOK REVIEWS

SIDNEY G. WINTER

Basic Financial Statement Analysis. Alexander Wall. (New York: Harper and Brothers, 1942. Pp. ix, 158. $2.50.)

Financial Statement Analysis. John N. Myer. (New York: Prentice-Hall, Inc., 1941. Pp. viii, 257. $3.25.)

Analysis of Financial Statements. Third Edition. Harry G. Guthmann. (New York: Prentice-Hall, Inc., 1942. Pp. xvii, 591. $5.35 trade, $4.00 school.)

These three books on analysis of financial statements present an interesting diversity of approach and treatment. Mr. Wall's book is written primarily from the viewpoint of the credit man, Mr. Myer's book from the standpoint of the accountant, and Mr. Guthmann's more from the standpoint of the business executive and the investor. These distinctions are neither consistent nor clear-cut, and are denied in part by the authors themselves, but nevertheless the differences are sufficiently apparent to be noteworthy.

Alexander Wall's book on *Basic Financial Statement Analysis* is the most individualistic. Although the publishers state that the book is addressed to two kinds of people, namely, the owners and the creditors of business, the author in his preface stresses the credit angle, and this viewpoint colors the entire treatise. Written in a rather popular style, the book includes some introductory chapters, then plunges into statement analysis, with emphasis upon ratio analysis, develops an analytical index, analyzes the statements of (1) a drug manufacturer (not identified by name, but obviously McKesson-Robbins), (2) a dealer in electrical supplies, and (3) a wholesale hardware company, and discusses a sound capital structure, term loans, and credit administration.

Mr. Wall places considerable stress upon (1) the construction of an analytical index, and (2) the use of common-size statements. Common-size statements are obtained by expressing each item of a statement in terms of a percentage of the total, thereby eliminating differences of magnitude and arriving at percentage figures which can be used to compare firms of varying size. The two devices are interrelated, an analytical index being constructed for the company under study and compared with a similar index for the trade through the use of common-size statements in both instances. The analytical index is made up as follows in the typical instance, although Wall admits that it may have to be modified to meet particular circumstances:

Current ratio	25%
Net worth—fixed assets	15
Net worth—debt	25
Sales—receivables	10
Sales—merchandise	10
Sales—fixed assets	10
Sales—net worth	5
Total Value	100%

Mr. Wall stresses the use of compiled trade statistics —a common-size expression from a composite of a number of roughly similar companies. It is notable that in using this comparison for a number of successive years the author does not hesitate to use trade statistics based on varying numbers of companies. In one example covering the years 1935 to 1939 inclusive, the trade figures are based on 53, 36, 37, 48, and 5 companies, respectively. The weakness both of the analytical index and of the use of trade statistics is commented upon by both other authors. The validity of such an artificial and relatively inelastic concept as an analytical index seems particularly open to question.

Another device used by Mr. Wall is that of the period statement. The figures for each balance sheet item for say a five-year period are added to obtain a total for the period. Common-size statements are then prepared for each year and for the period, and the period statement is used as a base for comparative purposes.

Mr. Wall's descriptions of accounting techniques are not always happy in their execution. For example, he refers to a pair of entries in accounting for depreciation to "reduce surplus and undivided profits and open an account called 'Depreciation Reserve' account for an equal amount." Similarly, his "kindergarten method" (the term is the author's) of explaining a sales transaction is confusing to say the least, through an apparent merging of the concepts of sales and cost of sales. Another point of interest is that although Wall stresses the importance of comparing actual net worth figures with expected net worth calculated by modifying beginning net worth by profits and dividends, he fails to mention the obvious step of analyzing surplus debits and credits in ascertaining the reasons for discrepancies.

Mr. Wall spends some little time in discussing term loans by commercial banks (new loans granted for a longer period than is usual in regular commercial lending), and in the related problem of credit administration under current conditions. He concludes that there is a need for such financing and that if the commercial banks do not fill the need, some new institution will spring up to fill it, as did instalment finance companies in the twenties.

The philosophy underlying Myer's *Financial Statement Analysis* is expressed in the following excerpt from the preface: "A full understanding of the statements which are the final product of the accounting processes requires a knowledge of these processes. Consequently, in the opinion of the author, only those with such knowledge are properly equipped for analysis of financial statements. For this reason the present work assumes on the part of the reader a familiarity with accountancy. . . ." Myer specifically states that his book is limited solely to that phase of enterprise analysis which is based upon financial statements, although management, credit, and investment analysis are touched upon briefly in the concluding chapter.

The content of Myer's book comprises an historical survey, a statement of the problem of financial statement analysis, an exposition of common defects in financial statements, and a discussion of the techniques of analysis, including comparison of statements, ratio analysis, statement of variation in profit, trends, and sundry measuring devices. One chapter is devoted to a consideration of standard ratios and leads to the conclusion that such ratios, especially so-called structural ratios based upon the balance sheet, have very limited use. A number of samples of standard ratios are examined in the process of establishing this point, and appear to sustain the conclusion fairly well. The final chapter is devoted to sundry measuring devices, which include the somewhat more specialized measures used in credit analysis (such as turnover and adequacy of working capital and the use of estimated statements) and in investment analysis (such as capitalization ratios, book value per share, earnings per share, and times interest earned).

Some of the statements made by the author probably would not receive universal acceptance. After citing W. Z. Ripley's criticism of published financial statements, he says "A new era in financial statement construction is here. No longer does one encounter the curiosities against which Ripley campaigned; they are of the past and are of interest only as a matter of history." While it is true that considerable progress has been made in the degree of disclosure evidenced in published financial statements, it is still possible to find fairly numerous examples of the "dance-card program" type of statement among stockholders' reports, and the allegation that the practice followed in preparing reports for the Securities and Exchange Commission has tended to become standard accounting practice is subject to considerable qualification. It is also rather surprising to encounter the statement that "the use of a contingency reserve is fast disappearing from contemporary statements."

Myer's "statement of funds" is rather distinctive. Although indicating that he considers it synonymous with the statement of application of funds, his statement is couched in terms of accounting for variation in working capital. The net increase or decrease in working capital is first ascertained through the medium of a comparative working capital schedule, and then the transactions increasing working capital (such as sales, issuance of capital stock, and sale of fixed assets) and those decreasing working capital (such as cost of goods sold, various expense items, and acquisition of fixed assets) are listed. This procedure is almost completely the reverse of that followed in the compilation of the more commonly accepted statement of application of funds in which a schedule of changes in working capital merely supports one item of funds provided or of funds applied. In addition to the statement of variation in working capital, Myer presents several modifications of a statement accounting for variation in net worth, some of which bear a certain resemblance to the conventional statement of application of funds.

An interesting omission is that in the discussion of trend ratios, net profit is omitted, although trend ratios are calculated for gross profit and for expenses. A favorite ratio which Myer fails to recommend for general use is the ratio of sales to fixed assets, although Wall accords this ratio a weight of 10 per cent in his composite index of ratios.

Like Wall, Myer plays down the significance of working capital and the working capital ratio, indicating that while important, they present only a part of the total financial picture, and that their importance should not be over-emphasized. However, he is far from being in agreement with Wall on the subject of an index of ratios, stating "The method suggested is to apply arbitrary weights to the ratios selected and to combine them into an index number. This procedure implies a homogeneity and precise significance which the ratios cannot possibly possess. If such a procedure could logically be followed, it would be highly desirable, but it is contrary to the nature of the statements and so must be regarded as a fantastic dream. However, it shows how seductive statistical methods may become to one who does not properly understand them."

The current edition of Guthmann's *Analysis of Financial Statements* is the third, the earlier editions having been published in 1925 and 1935. The structure of the third edition is similar to that of the preceding ones but the illustrative material has been brought up to date and recent changes in accounting practice and law have been included. As in the previous editions, there are two main divisions of the material, one dealing with the general technique of analysis, and the other with the analysis of different types of businesses, including railroads, public utilities, industrials (treated very briefly, since most of the analysis in the first part applies primarily to this category of business enterprises), mining companies, banks, insurance companies, and holding companies. A desirable innovation is the inclusion of more than 60 pages of problem material keyed to the several chapters.

The scope of the book is considerably broader than the title implies. A great deal of accounting material is included, as well as discussion of economic factors. In some instances the treatment is so comprehensive that it becomes a little difficult to get a clear-cut concept of how the analysis may be applied to a specific instance—a difficulty perhaps inherent in the nature of the subject matter.

Devotees of Finney will find the accounting concepts and the methods of presenting accounting material particularly familiar. A case in point is the well-known example of the error involved in including inventory at market value less than cost in the cost of sales section of the profit and loss statement, rather than showing the loss on depreciated inventory as a separate adjustment near the end of the earnings statement.

Professor Guthmann's position with respect to the use of standard ratios, or common-size ratios based upon industry averages, lies between that of Wall and that of Myer. He includes several tables incorporating such ratios, especially for the retail trade, but voices the caution: "Such studies should be used with care. They may represent common practice and yet be far from ideal practice. Or, they may represent concerns that represent a composite of varying conditions in such matters as size, credit policy, and location."

Like Myer, Guthmann is unimpressed with the concept of an index of ratios, although his comment is not so caustic as that of Myer. He states, applying his criticism particularly to the "index of credit strength" proposed by Wall and Dunning in the earlier *Ratio Analysis of Financial Statements* that "The method is subject to all of the difficulties attending the use of standard ratios already mentioned and the further one that the weight which should be accorded any particular ratio is necessarily variable. If a single fault is bad enough, the apparently favorable appearance of other ratios is an insufficient offset, even though it may be more than enough to cover up the fault in a composite index of arbitrarily weighted factors."

Among the ratios which Guthmann does not favor are those of fixed tangible assets to net worth (given a 15% weight in Wall's composite index), sales to tangible net worth (given a 5% weight in Wall's index), fixed liabilities to total assets, current debt to fixed debt, and surplus to capital stock. The ratio of plant turnover, not advocated by Myer but used by Wall, is accepted by Guthmann, although with some reservations.

The subject of term loans by commercial banks, with which Wall is so much preoccupied, is mentioned only incidentally by Guthmann, who says, however, that the rise of such loans has made for greater study of earnings and of the type of approach used for investment purposes.

In his discussion of holding companies, Guthmann stresses the weakness of the unsupported consolidated report, stating that "Just as the consolidated statements represent a distinct advance over the simple reports which treated the holding company as merely an investment company, so reports which contain added data relative to the individual subsidiaries should be regarded as the next important requirements for a full and adequate standard of information." It will be noted that this suggestion goes beyond present requirements of the Securities and Exchange Commission, but its merits are evident.

To sum up the features of these three books, Wall's book is the most personalized and stimulating, Myer's book represents a somewhat new approach to statement analysis but is rather limited in scope, and Guthmann's work is the most scholarly and comprehensive. Despite its shorter length, Wall's book is the only one which makes a practice of carrying examples to completion, including the drawing of final conclusions. Subject to certain exceptions, the other two authors are more likely to point out the considerations involved in the application of each ratio or group of ratios, rather than to make a complete analysis of any one set of figures. From the standpoint of textbook use, Wall's book would be less suitable than either of the other two for the usual college course, due to its brevity and restricted outlook. Guthmann's book has the advantage of incorporating a set of problem material, thereby constituting a self-contained whole, but a set of problems and questions is available to accompany Myer's text.

Allan J. Fisher

United States Treasury Department

Introduction to Managerial Statistics. Harry Pelle Hartkemeir. (New York: Thomas Y. Crowell Company, 1942.)

During recent years, and particularly as a result of the war emergency, statistical methods have been increasingly adapted to the problems of industrial managerial control. Although the basic principles, including correlation, analysis of variance, and probability, have not been greatly extended, their application in industrial fields has created problems which are worthy of consideration on their own merits. As a result textbooks on industrial statistics, as distinguished from business statistics, have recently appeared.

The work in question is a valuable addition to the new field of applied statistics. The author is a capable mathematician who is also familiar with the problems of industry which call for statistical treatment. His "Introduction" combines discussions of methods, stressing the actual problems and procedures rather than the theoretical mathematical background. It includes detachable work sheets arranged for students' computations, and answers to important questions. It includes also the more important tables, such as those of the normal curve, the 5 and 1 per cent values of F, t, and chi square, as well as a table of square roots and reciprocals.

The material covered includes measurements of frequency distributions based upon the arithmetic mean and standard deviation. Probabilities based upon the normal curve, including the standard error of the mean, are given careful consideration, and various methods of computation are discussed. Attention then is turned to qualitative analysis, and an excellent introduction to the use of chi square is presented. Production control with respect to mean and variability is also illustrated.

A minor criticism might be suggested with respect to the lack of problems arising from the possible skewness of the data, but on the other hand this aspect of the subject might well be left for consideration in more advanced phases of the work. On the whole the "Introduction" should find a wide field of usefulness in preparing students for urgent statistical problems of industry.

G. R. Davies

University of Iowa

Federal Tax Accounting (Fourteenth Edition). J. F. Sherwood and C. R. Niswonger. (Cincinnati: South-Western Publishing Company, 1942. Pp. 397. $3.60.)

Here is an excellent though somewhat sketchy textbook on Federal taxation consisting of 397 pages, a good many of which are quotations from the Internal Revenue Code and questions and problems.

A tabulation of the chapters of the book gives a fairly comprehensive idea of its contents: Chapter One—Introduction—25 pages; Chapter Two—Returns for Individuals—21 pages; Chapter Three—Gross Income of Individuals—21 pages; Chapter Four—Exempt Income of Individuals—13 pages; Chapter Five—Deductions Allowed Individuals—35 pages; Chapter Six—Net Income of Individuals—35 pages; Chapter Seven—Computation of Individual Taxes—23 pages; Chapter Eight—Returns for Estates and Trusts—15 pages;

Chapter Nine—Returns for Partnerships—11 pages; Chapter Ten—Returns for Corporations—38 pages; Chapter Eleven—Accounting Procedure—28 pages; Chapter Twelve—Administrative Procedure—29 pages; Chapter Thirteen—Capital Stock and Declared Value Excess-Profits Tax—15 pages; Chapter Fourteen—Excess Profits Taxes—10 pages; Chapter Fifteen—The Estate Tax—17 pages; Chapter Sixteen—The Gift Tax—12 pages; Chapter Seventeen—Excise Taxes—29 pages; and Chapter Eighteen—the balance of Chapter One of the Internal Revenue Code not quoted in the previous chapters—95 pages.

As previously mentioned, at the end of each chapter are pertinent questions and problems designed to illustrate the contents of that chapter. Practically every important aspect of Federal taxation is touched on, but because so much material is covered in such a short volume, it is doubtful whether the beginner could understand many of the more complex topics covered. For example, the following paragraph covers the surtax on personal holding companies:

"The surtax imposed on personal holding companies is in addition to the regular normal tax and surtax. The rates of surtax imposed on the undistributed net income are as follows:

1. 75% of the amount of net income not in excess of $2,000.00 plus;
2. 85% of the amount of the net income in excess of $2,000.00

A dividend carry-over in computing the dividends paid credit for the purpose of the surtax is allowed."

Again, in describing the gift of a life insurance or annuity contract, the following sentence stands without further explanation: "As valuation through sale of comparable contracts is not readily ascertainable when the gift is of a contract which has been in force for some time and on which further premium payments are to be made, the value may be approximated, unless because of the unusual nature of the contract such approximation is not reasonably close to the full value, by adding to the interpolated terminal reserve at the date of the gift the proportionate part of the gross premium last paid before the date of the gift which covers the period extending beyond that date."

It seems fair to assume that the authors, confronted with the problem of writing copiously on a few sections of the Code or touching briefly on most of the sections, decided on the latter procedure at least insofar as the more technical and complex topics are concerned. That procedure is eminently sensible because it obviates the possibility that the topic will be overlooked and the class instructor can elaborate to the extent that he deems necessary. Moreover the student is given a starting point on which to explore further in the regulations, services, treatises, and court decisions.

A chapter particularly helpful to the student is the chapter on accounting procedure illustrating the preparation of a return by means of a work-sheet.

S. E. White

Washington, D. C.

Guide for the Study of American Social Problems. Compiled for the American Social Problems Study Committee. (New York: Columbia University Press, 1942. Pp. vii+181. $1.00.)

This compilation is designed to serve the needs of community groups organized to discuss social problems and to undertake reform measures. It is based on the assumption that masses of the population can, through discussion, reach an understanding of the problems of our social organization and formulate and implement democratic means for their solution.

The *Guide* contains separate chapters on the Consumer, the Worker, the Farmer, Women, the Negro, Youth, Education, Housing, Civil Liberties, National Unity, and Problems of Security. Each chapter is prefaced by a brief and simple statement related to the material presented. The introductory remarks are widely different in character: some are informational, others are chiefly inspirational. The remainder of each chapter is a loose outline in the form of questions and annotated bibliographies. The references throughout are to leaflets, government releases, agency bulletins, reprints, and other ephemeral material that may be obtained free or at very small cost. A list of four to five hundred organizations issuing free or inexpensive propaganda and informational material is provided. Practically no use is made of the standard or scholarly literature.

The volume is without interest or value to social students. This statement is not meant as a criticism: the *Guide* is not designed for use by the academically competent. It is legitimate, however, to raise a question as to the social value of discussions designed to formulate and freeze popular opinions on the basis of partial and superficial information. John Doe is exactly as competent in the discussion of social problems as he is in the discussion of accounting problems.

E. B. Reuter

University of Iowa

Federal Tax Course. George T. Altman. (New York: Commerce Clearing House, Inc., 1943. $5.00.)

For academic purposes it would seem that a federal tax course should provide, among other things, (1) a clear presentation and interpretation of the tax laws, (2) an adequate description of the development of important tax provisions, (3) numerous references to leading court decisions, (4) generous editorial comment on the reasons for and effects of important provisions, and (5) a supply of thought-provoking problems.

Since Mr. Altman's text was first published in 1936, it has improved considerably on the first score. The original text was saturated with quotations from Supreme Court decisions and, though prepared in a scholarly fashion, was quite unreadable. The present edition, in the familiar loose-leaf form, includes illustrative examples at most of the points of difficulty. The book is still not to be classed as light reading, yet at the same time it should not be overly burdensome to the thoughtful student.

Throughout the text the rates and other provisions of prior acts are outlined in introducing new subject mat-

ter, and Supreme Court decisions are constantly quoted or paraphrased.

On the fourth count, the course is still open to considerable improvement. It is one thing to present the law clearly so that the student can understand it, but quite another to make the student feel really familiar with it. To achieve the latter the author must look to the committee hearings as well as the newspaper reports during the period in which the tax-law amendments are being formulated; in addition to this, the author should present his own notions as to the reasons for and purposes of the various provisions and, perhaps, certain views concerning the probable effects of the more important sections of the law. To the student who has not currently followed the emotional debate and political harangue resulting from the Ruml proposal, the 1943 tax law would be a most confusing conglomerate of bits and pieces. With proper background, however, one may readily recognize it as the inevitable shapeless mass which results from a multitude of compromises. The author does, as a matter of fact, make some attempt to rationalize a few of the provisions; it is to be hoped that future editions will show further improvement.

The problem material of the course is excellent. A common criticism of many of our problem courses is that the student "needs only to open the book to the right place and copy down the answer." In this case, however, although the problems depend upon a reading of the text for solution, the student must as a rule apply a fair degree of independent reasoning to reach a satisfactory answer.

Robert L. Dixon

University of Michigan

The Theory of Competitive Price. George Stigler. (New York: The Macmillan Company, 1942. Pp. 197. $3.00.)

Inasmuch as the ordinary university seldom attempts actually to cover economic "principles" in a first-year course, there should be considerable demand for an intensive and systematic treatment of the technical apparatus of economics which is suitable for a textbook, "a noun for unoriginal," for the intermediate of advanced level.

The Theory of Competitive Price, written specifically as such a text, does not set forth a unified economic theory or system which may be appraised and criticized as a whole. A review of this work must therefore deal largely with presentation and selection of material, and in this regard the reviewer finds little with which to disagree. The first forty odd pages are devoted to a competent treatment of the problems of scope, concepts, method, and functions. The following twenty pages are devoted to "fundamental quantitative relationships," and in this section are developed many of the relations which most economists feel they know, but seldom actually do. Considerable space is devoted to the development of the relation of marginal revenue to price and the elasticity of demand, to the measurement of point and arc elasticity, and to the numerous relations of marginal product to average and total product.

Part II of Mr. Stigler's effort is devoted to the theory of demand, the nature and laws of cost behavior, and the pricing of product and of productive services under pure competition. Demand is approached through the use of indifference curves with the usual expenditure curve and a discussion of the income and substitution effects. Some applications of the indifference technique are made to Edgeworth's barter case, to the problem of showing that individuals are better off when money is taken from them by a personal income tax rather than by a commodity tax, and to the statistical chestnut of the substitution bias in base and current quantity weights in the construction of price indexes.

The law of variable outputs is thoroughly treated as are the cost relations which are closely connected with this part of the subject, and the author is to be commended for his excellent separation and treatment of returns to scale. Pricing under competition is adequately treated and even here some material has been added. For example, in connection with the pricing of services the author (as might be expected) weaves in an algebraic proof that total product equals the sum of the distributive shares, "if they are paid the values of their respective marginal products, in competitive equilibrium" (p. 178), But above all it is a pleasure to find a set of genuine problems—problems which do not follow the all too common type: "Name five characteristics of a good money."

The adverse criticism of this excellent piece of work is not damaging but there are several points which may be objectionable to some readers. The reviewer is not exactly "antimathematical" yet Mr. Stigler's obvious interest in elementary geometry and higher analysis seems pointless if not downright irking. The somewhat elaborate geometrical "proof" that two indifference curves involving identical commodities cannot intersect (p. 69) seems slightly formal in light of the simple assumption upon which the truth of the proposition depends. On the other hand, the substitution of general purchasing power for a specific Y-commodity is made with no qualifications. The statement " . . . (the) geometrical analysis can be left to the reader" (p. 165) might well raise a question of emphasis regarding the nature of economic analysis and of description as an aid to analysis. Slight student confusion may arise from the use of small π as a symbol for both total and average cost (pp. 132, 185).

Professor Stigler is exceptionally careful to be precise in his statements, and as might be expected this quest for preciseness leads to fine distinctions which sometimes border on quibbling: for example, "Students frequently define *efficiency* as the ratio of output to input when in fact the first law of thermodynamics assures us that this ratio is always unity. Efficiency in the economic sense is the ratio of useful output to useful input . . . " (p. 33). In view of this admiration for extreme precision one is surprised to find (p. 72): "If consumers were completely indifferent whether they possessed green or red ash trays, then there would really be only one type of ash tray."

Many readers may be interested to find Professor Stigler developing the law of variable outputs (diminishing returns) by holding the "fixed" factors fixed only

in terms of investment and not in terms of the physical factors. "If the 11 smaller shovels have the same cost (say $100) as did the previous 10, then the investment in equipment has remained unchanged, and the additional product of the 11th man is attributable only to that man. This is a special case of the general requirement that the productive services which are held fixed in quantity may be readapted in form to the changing quantity of the variable service" (p. 122). Granted that the product added by the 11th man may be "attributable to that man" the desirable consequences so created seem a little vague when equal salaried managers or equal priced farms may have been substituted many times during an experiment. The reasons for formulating the law with marginals instead of with averages and the exact significance of decreasing marginal product per unit of variable factor, which according to the author "will be advanced later," are never carefully explained.

Many readers may feel some uneasiness also regarding Mr. Stigler's general statement of entrepreneurial expectations. With regard to expectation ranges for future low prices, he states: "The greater the dispersion of the distribution, the less money he will venture on this deal . . . the amount of money he will venture will vary inversely with the standard error of the probability distribution" (p. 151).

The Theory of Competitive Price is an excellent addition to the literature. The second and forthcoming part of this work, a treatment of imperfect competition and related subjects, should be of even more interest. Let us hope that the author does his usual good job on these tricky problems, especially in regard to the desirability of equating marginal social cost with price in order to avoid maldistribution of resources; the chief virtue of competition probably lies here.

CARL THOMAS DEVINE
Johns Hopkins University

Preparing for Business. Charles W. Hamilton, J. Francis Gallagher, and Charles Fancher. (New York: Prentice-Hall Inc., 1942. Pp. xii, 493. $1.60.)

Preparing for Business is a textbook written for the purpose of developing a ninth or tenth grade course in business. The information in it would be helpful to a bookkeeping student in high school, but the book does not develop any portion of accounting practice or theory. Because of the fact that the material is intended for use in such elementary classes, the book must be evaluated from the point of view of the objectives of such courses.

High school work in the field of business has recently incorporated a three-part objective in addition to the skill training commonly developed since the beginning of the century. This three-part objective may be expressed as follows:

1. To develop understandings of the broad area of economic processes on the part of all pupils.
2. To develop understanding of business activities as a background for the immediate setting in which a person practices a skill.
3. To develop an ability on the part of each individual to act intelligently in conducting his personal relationships with business, regardless of his major activity in life.

In addition to these objectives, the authors of *Preparing for Business* have incorporated several objectives relating to the development of improved ability in arithmetic and handwriting, orientation in the field of business by providing a basis for further study, and the development of character traits.

Needless to say, when one examines the extensive area of knowledge classified as business and attempts to select that subject matter which will accomplish the objectives described, he faces a complex problem. On the whole, the authors have worked through this problem reasonably well. Chapters on some subjects explain business aspects of common activities, such as those incident to school life, home life, filing personal papers, use of the mail, telephone and telegraph service, and bank services. The treatment of personal budgets and the discussion of consumer payments and purchases provides a knowledge and perhaps a skill which is a part of modern living.

But the book goes beyond these activities and explains briefly the nature and function of some business practices from the point of view of society as a whole. These chapters are included in the second half of the book and include Business Organization, Distribution in Modern Life, Simple Business Law (chiefly relating to contracts, agency, and the master and servant principles), and Ownership of Business Enterprises.

When such an extensive coverage is attempted, it must be true that one book can touch only the high spots; but such coverage is justified because the authors have provided not only a preview of the wider field, but also a wealth of discussion questions, projects, and related arithmetic and vocabulary exercises. The preview touches upon those elementary ideas which are mysteries to the younger high school students and about which the authors' teaching experience must have revealed an avid interest. A newsboy, for example, soon becomes interested in the nature of an instalment contract, a bond, or a promissory note. By means of the questions, problems, and exercises, the teacher will be able to develop more intensive knowledge about a specific subject.

A valuable feature of the book is found in the development of arithmetic. Many teachers have believed that the background of information necessary to understand the nature of a problem should be developed simultaneously with an ability to solve the problem. This book provides such simultaneous treatment. By this means, discounts, interest, coinsurance, and many other problems become meaningful to the young and inexperienced pupil. The last chapter of the book reviews the fundamental processes in arithmetic; probably the teacher will find it necessary to refer constantly to this chapter, throughout the course, whenever absence of skill in a fundamental process hinders the solution of a functionalized problem.

The whole book is elementary. It does not develop controversial points. Rather, it provides the background which is necessary before controversial points can be

discussed intelligently. The text is objective and impartial in its presentation of facts. A study of it could not but develop intelligent points of view relative to the complexities of one's business life.

GEORGE M. HITTLER

University of Iowa

Regulation of Utility Valuation in Pennsylvania. William Roy Buckwalter. (Privately printed. 1942. Pp. 328. $3.50.)

Professor Buckwalter presents his treatment of the regulation of public utility valuations in Pennsylvania in nine chapters. The first is a historical chapter on rate regulation before the creation of the public service commission in 1923, and the last is a summary and conclusions. The intervening seven chapters are devoted to the valuation problem. In these he presents his subject matter under the following topics: Fair Value, Reproduction Cost Basis, Original Cost and Other Valuation Methods, Tangible Items of Valuation, Valuation of Intangibles, Depreciation, and Rate Return.

The book is elaborately documented, and contains innumerable citations from Pennsylvania court and commission decisions, other state court and commission decisions, and, of course, the Federal cases, especially those of the Supreme Court of the United States.

To review in detail is impossible. Four comments, however, seem to be in order.

1. The book has within its first page a major fallacy. In the preface, Professor Buckwalter says that the "total allowable income which a utility is permitted to collect through rates is composed, in large part, of the return allowed on the valuation of the property. . . ." This is patently not so. Utility investment and income bear a ratio often in the neighborhood of 5 to 1. Thus, on an unusually generous return basis of 8% out of each dollar of income only 40¢ would be returned on the investment. Upon a 5% rate, the return would absorb but 25¢ of each dollar.

From this, the easy exaggeration of the valuation question follows. To write on valuation is to overlook the broader question of reasonable rates. Valuations are made solely for the purpose of deciding how much a fair return should be. This fair return is but a portion of the total expenses that should be recouped from reasonable rates.

2. Professor Buckwalter shows no familiarity with the significant contribution of Bonbright to our thinking on the valuation problem. It is easy to poke fun at the courts for their *potpourri* of irreconcilable elements in a utility valuation formula, particularly that found in *Smyth v. Ames*. What most of us have missed (and what Bonbright in his *Valuation of Property* so well explained) is the premise of the court that value is the thing that can be found. Having taken that premise, it next sets itself to review the evidences of value. Finding no one rule of evidence to be conclusive, the court then resorts to the process of including them all as items to be considered.

Fundamentally, economic value cannot be found in utility valuation cases. To admit this clears the air, and obviously alters the pattern of our analysis.

3. Professor Buckwalter concludes his monograph with scarcely more than a page of real comments and conclusions. As one who for 18 years has followed casually the ups and downs of the state commissions, I know that the one in Pennsylvania often comes in for scathing criticism. Did the legislature of that state not contemplate at one time its replacement by a "Fair Rate Board"? We find not one word of these occasions.

4. This brings me to the final comment, namely, the futility of valuation studies confined to a single state. The problem is really nationwide, and no state can develop its own theory and practice without regard to other state and Federal theory and practice. Professor Buckwalter acknowledges this by his copious quotation from other state cases and from Federal cases especially.

I approached the book in the hope that I would find the history of public utility regulation in Pennsylvania woven around the valuation problem. I hoped to see something of its year by year growth, to see how practical solutions were devised to meet problems as they arose. What peculiar situations have developed in Pennsylvania? What was the story behind the demand of the 1930's for a radical change in commission personnel? In what ways has the commission been derelict? Except for a single paragraph citing the scarcity of commission initiated proceedings, I found no answers to these questions.

C. WOODY THOMPSON

University of Iowa

ASSOCIATION REPORTS

Memorandum from the President

In the April number of the Accounting Review my memorandum advanced some ideas in the hope that they might stimulate members to express their ideas also. I want to continue the practice whenever I have information the membership should have or ideas that might be discussed.

I have had the benefit of comments by correspondence from several members of the executive committee and helpful conversations with other members of the Association at one time or another. In addition, I have had advice from the editorial board, augmented for a meeting in Chicago on May 8 by Dixon, Winter, and Gilman. Since four members of the executive committee were present, I considered it an appropriate time to ask advice on other matters in addition to those connected with the Review.

Committees. As to committees, it seemed advisable to appoint territorial membership solicitors to use a printed statement of Association objectives in a persistent campaign. No objection was made to a committee on monographs and Paton has been appointed chairman, with George Bailey and Stephen Gilman to serve with him. The committee has begun consideration of ways and means of carrying on this important Association activity, and may soon have another monograph ready.

Opinion at the meeting of May 8 was favorable to attempting some research looking toward a statement of cost accounting principles (see Dixon's statement elsewhere in this issue) to be formulated by a special committee. Other research projects, if any such appear, can be given to other special committees to study. After some experimentation along these lines for a while, it would be necessary to decide whether research should be continued by special committees, by designated standing committees, or by research directors. Other matters of Association policy will probably need to be studied later also, when orderly legislation is once more possible.

Day-long Forums. Although there were obvious difficulties connected with the proposed series of local meetings, or "day-long forums," the advantages in these times outweighed the disadvantages. It should perhaps be emphasized that such "forums" are organized only for the presentation of papers and discussion (no legislation will be considered), that they are merely a temporary departure from the established custom of having an annual, national meeting, and that the Association cannot pay the expense of having officers attend the meetings or of securing out-of-town speakers.

At the time this is written it seems likely that a few forum meetings will be held in the summer months and others in the early autumn. Unfortunately, the details are not yet complete enough for stating here.

The meeting in one place could conceivably have been designated as the national meeting. But in fairness to all other meetings, this seems inappropriate. The meeting in Chicago may come closer than the others to being a session in the traditional form. However, this will be true only because of the availability of several members of the executive committee, and the possibility that some committee reports may be given there. It will not be appropriate for legislative action to be taken there since that would not be advisable under these circumstances at any of the forum meetings.

Election Procedure. The established election procedure could not be followed in 1942, and emergency action was taken as reported in the Accounting Review for January and April, 1943. Since abnormal conditions still prevail and normal procedures cannot be followed in a national meeting, I wish to present here a temporary substitute method for criticism by the membership.

I think that, in so far as it is possible, the same general principles should prevail as were outlined by the nominating committee at the time of the 1939 meeting—Professors Scovill, Paton, and Kester (see the Review for March, 1940). The ideas favored were these: (1) It is thought advisable to have a geographical distribution of members of the executive committee, accompanied, when possible, by enough geographical concentration so that interim conferences on Association matters could be held without incurring excessive expense. (2) The existence of many institutions of high rank suggests that a rapid turnover of vice-presidents could be a means of extending more widely the official family of the Association.* This would preclude considering any vice-president as necessarily in direct line for election as the next president. (3) Nominations for the presidency could very well be made from those who at some time in the past had served the Association as vice-president, editor, research director, or in some other capacity. No formula can be constructed for selecting an Association president. But certain factors will usually be found to have a bearing, such as the standing of the individual and his institution in the accounting world, and the interest he has shown in the activities of the Association.

These ideas seem to me to be worth continued application in so far as they can be fitted into the present situation.

It is not easy for us to keep functioning without legislative assembly. Association legislation can be held in temporary abeyance, but somewhat greater reliance has to be placed meantime upon the judgment and decisions of Association officers and committees. How to elect officers remains a problem. I propose the following temporary procedure:

1. Publish this statement in the Accounting Review for July describing the proposed temporary election procedure, and asking for suggestions and names that a nominating committee might consider (please write me promptly).
2. Appoint a fairly large nominating committee of past presidents and ask them to prepare a slate of officers after considering suggestions received.
3. Send a mail ballot to all members asking them to vote (a) for or against the committee's slate of officers, and (b) for or against appointment of a new nominating committee to select a new slate of officers, and submit a new ballot to the membership.

This procedure is clearly an expedient; it can not hope even to approximate personal contacts in a meeting of members. But it does provide temporary machinery that gives the membership a rough equivalent power of "nominations from the floor" and lodges a veto with the membership itself.

It would be possible, perhaps, to announce the results of the balloting in the September forum meetings and for the new officers to begin early to lay plans for their term of activity.

Cooperation. On May 10 and 11 in New York, Professor Paton joined me in representing the Association at the spring meeting of the Council of the American Institute of Accountants. We were impressed with the official and individual cordiality we met, and with the interest shown in may ways in education

* A practicing certified public accountant has several times been chosen as one of the three vice-presidents. The idea has much to commend it.

and in the Association. It will be gratifying to all educators to hear, as we did, that recent admissions to the Institute showed nearly three-fourths of the number to be college graduates. Both of us expressed opinions from the floor on matters regarding which our views might be useful. It was pointed out that about one-third of our members were also members of the Institute, and that about half of the accounting teachers in the schools that form the American Association of Collegiate Schools of Business are Certified Public Accountants. We were pleased to learn from the discussions from the floor that the Council was of the opinion that further thought should be given to the suggestion of having experienced psychologists consider the possibility of devising aptitude tests which might be useful to teachers of accounting in advising students and to employer accountants in recruiting and watching the progress of members of their staff. I have elaborated somewhat on the idea of aptitude tests in a section of "The Accounting Exchange" in this issue.

It is interesting to note that several members of the Association are in active service in the Institute, and vice versa. Five members of the Association's executive committee and eight members of the editorial board and staff are members of the Institute. An Association vice-president (Walter A. Staub) is chairman of the Institute's committee on accounting procedure. Two former vice-presidents of the Association are members of the Council of the Institute (Victor A. Stempf and George D. Bailey). On the Institute's committee on accounting procedure are three past-presidents of the Association (W. A. Paton, H. T. Scovill, and S. G. Winter) and two associate editors of the ACCOUNTING REVIEW (George D. Bailey and Stephen Gilman). The director of research for the Institute (James L. Dohr) is a past-president of the Association; a member of the Institute's committee on auditing procedure (I. N. Frisbee) was recently a vice-president of the Association; and a member of the Institute's committee on education (R. B. Kester) was president of the Association some years ago.

These "cross references" are a few items of evidence among many showing that a spirit of active cooperation exists between the two organizations and that many avenues of contact are available for use whenever the occasion arises.

MISCELLANEOUS. A small pamphlet is in preparation which will compactly present our objectives and activities in a form that will be particularly appropriate for use in securing new members. The statement of objectives prepared in 1936 has been used as a starting point and opinions for restatement have been sought from a considerable number of members. All ideas received are under consideration as the pamphlet is being drafted. The finished product will not be treated as a pronouncement of the Association but rather as an invitation to prospective members.

A. C. LITTLETON

New Orleans Program

The members of the American Accounting Association in New Orleans and the surrounding area, under the leadership of Professor Paul C. Taylor of Tulane University, organized a one-day local meeting for June 26.

MORNING SESSION

Chairman: L. J. Buchan
Dean, College of Commerce and Business Administration, Tulane University

Invocation: Rev. Elmer C. Gunn
Corrallton Avenue Methodist Church

Welcome: George Schneider
Association of Commerce, New Orleans

"Differential Costs" by Professor E. A. Saliers, Louisiana State University

"Graphic Analysis of Costs" by Professor L. F. Brush, Louisiana State University

"The Service the CPA can Render" by Louis Williams, T. W. LaFrentz & Co., New Orleans

LUNCHEON PROGRAM

"A Toast to Professional Accountants" by Professor William Carr, Loyola University

AFTERNOON PROGRAM

Chairman: Edward S. Rittler, of Moses, Rittler and Dienes, New Orleans

"The CPA Examination" Dick Quin of Dick Quin & Co., Jackson, Mississippi

"The Profit and Loss Statement: Recent Trends as to Form, Function and Interpretation" by Professor Arnold W. Johnson, Tulane University

"Accounting Practice Under the Securities Act of 1933" by Harry John Williams of Peat, Marwick, Mitchell & Co., New Orleans

ASSOCIATION NOTES

ROBERT L. DIXON

NEW MEMBERS

Mr. George O. May of Price, Waterhouse & Co. has recently become a Life Member of the Association.

The following have become regular members of the Association since April 1, 1943:

NAME	PROFESSIONAL CONNECTION	NOMINATED BY
W. H. Asmus, Jr.	Army Ordnance	Albert Henwood
J. B. Blayton	Atlanta University	R. L. Dixon
J. J. Bokun	A. E. Mallard Laboratories	R. L. Dixon
H. A. Greene	Tennessee Coal, Iron & Railroad Co.	H. Saunders
F. L. Heuser	Army Ordnance	Joseph Henwood
R. B. Hissrich	Philadelphia and Subsidiary Companies	J. N. White
T. A. Jones	War Manpower Commission	P. M. Green
L. C. Joyer	Private practice	P. D. Lipscomb
W. E. Martinson	Army Ordnance	Albert Henwood
L. A. Mecklenberg	Hatfield-Campbell Creek Coal Co.	R. L. Dixon
R. M. Pool	Ohio State University	R. S. Willcox
E. G. Stotsenberg	Lybrand, Ross Bros. & Montgomery	R. L. Dixon
J. B. Turner	Private practice	R. L. Dixon
L. S. Virata	Certified Public Accountant	R. L. Dixon

PERSONAL NOTES

Carl E. Allen (Lehigh University) has been elected Acting Assistant Treasurer of the University, to serve during the absence of John Kirkpatrick who is now a Naval Lieutenant.

Jesse B. Blayton (Atlanta University) is preparing a text to be entitled "Essentials of Accounting" in which emphasis is centered especially on the affairs of small business enterprises.

Victor Z. Brink (Columbia University) has been promoted to the rank of Assistant Professor, and is a Major with the Fiscal Division Army Service Forces.

J. M. Carrithers (University of Illinois) is now an accountant with the Office of Price Administration in Chicago.

A. B. Carson (University of Nebraska) is now serving as Administrative Assistant at Richmond Shipyard Number Three of the Kaiser Company.

Robert I. Dickey (University of Illinois) has been assigned to the Army Administration Officer Candidate School at Fort Washington, Md.

C. J. Gaa (University of Illinois) is in the Army Finance Officers' Training School at Indianapolis, Indiana.

B. Bernard Greidinger is now a Major in the Army, located at the Office of the Chief of Finance, Washington, D. C.

Harry L. Kunze (University of Wisconsin) is on leave of absence during the current year and is associated with the accounting firm of Reilly, Penner, and Benton in Milwaukee. Professor Kunze is also Vice-President of the Wisconsin Society of Certified Public Accountants.

R. K. Mautz (University of Illinois) is attending the Navy Midshipmen's School at Northwestern University.

Lamar J. Otis is acting as Systems and Methods Accountant on the staff of the Comptroller of the Pittsburgh Plate Glass Company.

Fladger F. Tannery (University of Texas) is now a Major in the Army Air Forces.

C. F. Ziebarth (Valparaiso University) has been promoted to the rank of Major, serving in the Port Transportation Office at the Portland port of embarkation.